

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
US EPA BROWNFIELDS HAZARDOUS MATERIALS
ASSESSMENT GRANT
BF 98798001**

FORMER RAIL DEPOT

**CLINTON COUNTY
CLINTON, IOWA**

February 2011

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
US EPA BROWNFIELDS HAZARDOUS MATERIALS ASSESSMENT GRANT**

FORMER RAIL DEPOT

PIN# 80-58440000

**CLINTON COUNTY
CLINTON, IOWA**

HR GREEN COMPANY PROJECT NO. 725560J09

Prepared for:

CITY OF CLINTON

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1.0 EXECUTIVE SUMMARY

The City of Clinton (City) is currently participating in the U.S. Environmental Protection Agency (EPA) Brownfields Assessment program. The goal of the program is to facilitate community revitalization and economic development by addressing real or perceived environmental issues associated with abandoned or underused properties in the Clinton Brownfields Area. The Former Rail Depot, located at 325 11th Avenue South in Clinton, Iowa (Site) is located in the Clinton Brownfields Area and was evaluated for this Phase II Environmental Site Assessment (ESA). The original Phase I ESA was completed in October 2010. The Site location is shown in Figure 1 (Appendix B).

Field and laboratory quality control objectives were maintained in accordance with the procedures outlined in the approved Generic Quality Assurance Project Plan (QAPP) and the Property Specific Sampling and Analysis Checklist (PSSAC). The Iowa Department of Natural Resources (IDNR) acknowledges many of the statewide standard limits cannot be achieved by routine commercial laboratory analysis. In this case, the laboratory method detection limit (MDL) is typically used as the standard for decisions regarding further action.

On January 4th and 5th, 2010, three soil borings were advanced on the property to collect soil and groundwater samples related to the RECs identified during the Phase I ESA. The soil samples were screened for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). Selected soil samples were containerized and transported to the laboratory for the analyses described in the PSSAC. All soil samples were preserved with ice to approximately 4° Celsius. Groundwater was encountered in one of the three borings above bedrock.

The soil sampling results have been compared against Iowa Statewide Standards and Tier 1 Look-up Values and are provided in this document. The findings and conclusions are summarized as follows:

- None of the detected constituents were above the applicable standards for Range 1 or Range 2 soil samples.
- Two of the proposed groundwater samples were not collected due to shallow bedrock. The concentration of TEH as Motor Oil at Depot-2 exceeded the Tier 1 Lookup Value for a Protected Groundwater Source, but was below the Tier 1 Lookup Value for Non-Protected Groundwater.

No constituents were detected above any applicable standard in the soil samples collected at the Former Rail Depot. Groundwater was encountered at one of the three proposed locations. The concentration of TEH as Motor Oil at Depot-2 exceeded the Tier 1 Lookup Value for an actual receptor, but was below the Tier 1 Lookup Value for a potential receptor. The City has an ordinance prohibiting the installation of drinking water wells within the Liberty Square Corridor, and no water wells currently exist within 1,000 feet downgradient of the site (Appendix E). The risk appears to be minimal, however the Tier 1 Lookup Values were exceeded and this report should be supplied to IDNR for further guidance.

2.0 INTRODUCTION

The City of Clinton received a U.S. EPA Brownfields Assessment Grant to conduct environmental assessments on properties located within the Clinton Brownfields Area. The goal of the City's Brownfields Assessment program is to facilitate community revitalization and promote sustainable economic conditions by addressing any real or perceived environmental conditions associated with abandoned or underused properties within the Clinton Brownfields Area. The EPA Brownfields Cooperative Agreement provides funding to accomplish this goal.

2.1 Purpose

The major objective of the Brownfields Project is to eliminate concerns regarding perceived or actual contamination on properties so redevelopment can occur. The objective of this assessment was to evaluate environmental impairment to the property resulting from the RECs identified during the Phase I ESA process. The data gathered during this assessment will assist the city in evaluating the feasibility of redevelopment by comparing constituent concentrations on the property to the risk-based standards outlined in Iowa Administrative Code (IAC) 567 Chapter 137: *Iowa Land Recycling Program and Response Action Standards* or the Tier 1 Levels in IAC Chapter 135: *Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (USTs)*.

Should the City pursue acquisition of the property, this assessment will allow them to satisfy the all appropriate inquiry requirements to obtain protection from potential liability under CERCLA¹ as an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser.

2.2 Problem Statement

The EPA Brownfields Cooperative Agreement requires environmental data collected are of the appropriate type, quantity, and quality to support project decisions. Project data quality objectives (DQOs) were identified in the Generic Quality Assurance Project Plan (QAPP) for the Superfund Integrated Site Assessment and Targeted Brownfields Assessment Programs, November 1998 (Updated July 2005). Project specific DQOs were identified and documented in the "Property-Specific Sampling and Analysis Checklist (PSSAC) for the Generic Quality Assurance Project Plan for Superfund Integrated Assessment and Targeted Brownfields Assessment Programs".

Evaluation of environmental impairment is conducted using the regulatory programs outlined in IAC. Evaluation of environmental impairment not associated with USTs involves risk-based evaluation and response action through the voluntary Land Recycling Program (LRP) as set forth in IAC 567-137(457B) Chapter 137: *Iowa Land Recycling Program and Statewide Response Action Standards* (IAC 137). In the event contamination is associated with USTs, IAC 137 defers to the evaluation criteria outlined in IAC 567-135(455B) Chapter 135: *Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks* (IAC 135). For this Project, soil and groundwater evaluations for public risk were conducted according to IAC 135 and IAC 137, depending on the source of contamination.

¹ Comprehensive Environmental Response Compensation and Liability Act

3.0 BACKGROUND

The site is located within the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 7, Township 81 North, Range 7 East in Clinton County, Iowa, and is further located by the approximate latitude and longitude at 41.834176° North and -90.192704° West (see Figure 1, Appendix B).

3.1 Site Characteristics

The Former Rail Depot consists of a single-story former rail depot building currently used as a retail store (Figure 1, Appendix B). The site is bound by a railroad right-of-way to the southeast and South 3rd Street to the northwest. The site is located in a primarily industrial and commercial area of the city. Drainage from the property flows to the southeast.

3.2 Phase I Environmental Site Assessment

HR Green performed a Phase I ESA on the Former Rail Depot in October 2010. The assessment revealed evidence of two RECs in connection with the subject property. The RECs are summarized below.

Off Site RECs:

1. The historical and current use of the property located south and southeast of the site as a railroad right-of-way and railroad tracks. Historical Sanborn maps identify the railroad tracks as early as 1890. Additionally, the site reconnaissance identified several areas of stressed vegetation within the right-of-way. Common materials associated with railroads include: alkalis, antiseptics, cutting fluids, detergents, diesel fuel, fungicides, heating oil, herbicides, insecticides, lacquers, lubricants, paint removers, paints, petroleum fuels, pitch, solvents and tar and derivatives.
2. The current and historical use of the adjacent property to the northeast. The City of Clinton currently uses the property as the Street Department storage and maintenance facility. Common materials associated with automotive repair include abrasives, acids, adhesives and removers, alkalis, antifreeze, battery acids, brake fluids, brake linings, cleaners, detergents, diesel fuel, epoxy resins, flame retardants, gasoline, gasoline additives, heating oil, hydraulic fluids, lubricants, oils, paint removers, paint thinners, paints, petroleum fuels, rubber, solders, solvents, thinners, transmission fluids, and waste oils. Historically the property was part of the Chicago and Northwestern Railroad Repair Shops and Yard.

4.0 PHASE II ACTIVITIES

The purpose of the Phase II ESA is to assess potential environmental liability associated with acquiring the property. The sampling plan developed in the PSSAC proposed three Geoprobe borings for the Former Rail Depot, labeled Depot-1, Depot-2, and Depot-3. Soil and groundwater samples from borings Depot-1 and Depot-2 were proposed to investigate potential impacts from the adjacent railroad right-of way and tracks. Depot-3 was proposed to investigate potential impacts from the adjacent property's maintenance and repair facility. Borings Depot-1, Depot-2, and Depot-3 were to be analyzed for volatile organic compounds (VOCs) and total extractable hydrocarbons (TEHs). Depot-1 and Depot-2 were also to be analyzed for Polycyclic Aromatic Hydrocarbons (PAHs).

On January 4th and 5th, 2011, three geoprobe borings (Depot-1, Depot-2, and Depot-3) were advanced on the subject property (see Figure 2 in Appendix B). Bedrock was encountered at 9 to 13.5 feet below ground surface causing drilling refusal at all of the three boring locations. Groundwater was only encountered above bedrock at boring Depot-2.

There were no other site-specific conditions which warranted deviation from the PSSAC.

4.1 Soil Assessment Results

Soils encountered in the borings were primarily silty sand to sandy clay. Soil samples were collected over the full depth of each soil boring and screened for the presence of VOCs using a Photoionization detector (PID) and logged for geologic materials. PID readings from all borings were generally low, but soil samples were retained for laboratory analysis. The highest PID readings for each boring were located in the 10 to 12.5 feet bgs interval from Depot-1, the 12 to 13.5 feet bgs interval from Depot-2, and the 5 to 7.5 feet bgs interval from Depot-3. The samples were placed in laboratory supplied containers and transported to the laboratory under chain of custody protocol.

Soil sample locations are shown on Figure 2 (Appendix B). Soil boring logs are provided in Appendix D. Laboratory analytical reports can be found in Appendix C. A description of the sample locations and rationale for laboratory analysis were provided in the PSSAC and results are described in the following sections.

Range 1 Soil

Two soil samples were collected from Range 1 (0-2 feet bgs). The Range 1 samples were analyzed for PAHs. Results are presented in Table 1 for detected analytes. No PAH compounds were detected in the soil sample from Depot-1. Eleven PAH compounds were detected in the soil sample from Depot-2 but at concentrations below the statewide standards.

Table 1
Phase II ESA Range 1 Soil Analytical Results (mg/kg)²

Contaminant	Statewide Standards	Site/Sample ID	
		Depot-1 (0-2.5')	Depot-2 (0-2.5')
Polycyclic Aromatic Hydrocarbons			
Benzo[a]anthracene	3.1	<0.0104	0.0237
Benzo[a]pyrene	0.31	<0.0104	0.037
Benzo[b]fluoranthene	3.1	<0.0104	0.0461
Benzo[g,h,i]perylene	170	<0.0104	0.0415
Benzo[k]fluoranthene	31	<0.0104	0.0114
Chrysene	310	<0.0104	0.0292
Dibenz[a,h]anthracene	0.31	<0.0104	0.0124
Fluoranthene	2300	<0.0104	0.0417
Indeno[1,2,3-cd]pyrene	3.1	<0.0104	0.0323
Phenanthrene	1700	<0.0104	0.0136
Pyrene	1700	<0.0104	0.0398

- **Bold** indicates concentration above laboratory reporting limits. Shaded indicates concentration above applicable Standard.

² mg/kg = milligrams per kilogram

Range 2 Soil

Three soil samples were collected from Range 2 (>2 feet bgs). The Range 2 samples were analyzed for TEHs and VOCs. Results are presented in Table 2 for detected analytes. No VOC compounds were detected in any of the Range 2 soil samples. No TEH compounds were detected at Depot-1 or Depot-2. TEH as Diesel and as Motor Oil were detected at Depot-3. No Statewide Standards or Tier 1 Look-up Values have been established for TEH as motor oil. The concentration of TEH as diesel was below the IDNR Tier 1 Look-up value.

Table 2
Phase II ESA Range 2 Soil Analytical Results (mg/kg)³

Contaminant	Statewide Standards	Site/Sample ID		
		Depot-1 (10-12.5')	Depot -2 (12.5-13.5')	Depot -3 (5-7.5')
Total Organic Hydrocarbons				
Diesel	3800*	<10.0	<10.0	38
Motor Oil	NC	<10.0	<10.0	34.7
Total Extractable Hydrocarbons	NC	<10.0	<10.0	72.7

- NC= None calculated / NA = Not Analyzed
- **Bold** indicates concentration above laboratory reporting limits. Shaded indicates concentration above applicable Standard.
- * Tier 1 Look-up Value

4.2 Groundwater Assessment Results

Groundwater was only encountered on the subject property in boring Depot-2. Groundwater samples were collected for analysis of VOCs and TEHs. Groundwater sample results are presented in Table 2 for detected analytes. Four VOCs were detected in the groundwater sample below the Statewide Standards. The concentration of TEH as Motor Oil at Depot-2 was above the Tier 1 Lookup Value for an actual receptor, but below the value for potential receptors. There are no statewide standards for TEH.

Table 3
Phase II ESA Groundwater Analytical Results (mg/L)⁴

Contaminant	Statewide Standard PGW	Statewide Standard NPGW	Site/Sample ID
			Depot-2
VOCs			
Acetone	6.3	32	0.00522
Chloromethane	0.03	0.27	0.00048
Dichlorobenzene, 1,3-	0.6	3.2	0.00025
Methyl Ethyl Ketone	4	21	0.00124
Total Extractable Hydrocarbons			
As Motor Oil	0.4*	40*	1.43
Total extractable hydrocarbons	N/A	N/A	1.43

- NC= None calculated / NA = Not Analyzed
- **Bold** indicates concentration above laboratory reporting limits. Shaded indicates concentration above applicable Standard.
- * Tier 1 Look-up Value

³ mg/kg = milligrams per kilogram

⁴ mg/L = milligrams per kilogram

4.3 Risk Evaluations

Subrule 567 IAC 137.10(7) specifies cumulative risk criteria that must be complied with to acquire a no further action certificate under the Iowa Land Recycling Program (LRP). Cumulative risk is the summation of cancer and non-cancer risks, determined separately, based on exposure to multiple contaminants from the same medium and exposure of the same individual to contaminants in multiple media. Evaluation of cumulative risk is conducted using the cumulative risk calculator on the IDNR Contaminated Sites Section website. The cumulative risk calculator assesses risk to potentially exposed parties, based on three standard exposure scenarios, from multiple contaminants and multiple media (i.e., groundwater, soil, and air).

To evaluate compliance with the acceptable risk criteria, the cumulative concentrations of contaminants must meet standards limiting increased cancer and non-cancer health risk. The cumulative risk criteria are as follows:

- Cumulative cancer risk shall not exceed 1 in 10,000.
- Non-cancer health risk to the same target organ shall not exceed a cumulative Hazard Quotient of 1.

Determination of exposure point concentrations for the risk calculation can be accomplished using one of the following methods.

- The maximum value for each contaminant in each medium from multiple samples of each medium of concern.
- The 95% Upper Confidence Limit (95% UCL) of the mean contaminant concentration in each medium.

No risk calculations were completed, as no contaminants were detected above Statewide Standards. TEH compounds were detected above the Tier 1 Lookup Values; however TEH compounds are not included in the risk calculating software.

5.0 FINDINGS AND CONCLUSIONS

The results of the Phase II investigation are provided in this document. The findings and conclusions are summarized as follows:

- None of the detected constituents were above the applicable standards for Range 1 or Range 2 soil samples.
- Two of the proposed groundwater samples were not collected due to shallow bedrock. The concentration of TEH as Motor Oil at Depot-2 exceeded the Tier 1 Lookup Value for a Protected Groundwater Source, but was below the Tier 1 Lookup Value for Non-Protected Groundwater.

6.0 RECOMMENDATIONS

No constituents were detected above any applicable standard in the soil samples collected at the Former Rail Depot. Groundwater was encountered at one of the three proposed locations. The concentration of TEH as Motor Oil at Depot-2 exceeded the Tier 1 Lookup Value for an actual receptor, but was below the Tier 1 Lookup Value for a

potential receptor. The City has an ordinance prohibiting the installation of drinking water wells within the Liberty Square Corridor, and no water wells currently exist within 1,000 feet downgradient of the site (Appendix E). The risk appears to be minimal, however the Tier 1 Lookup Values were exceeded and this report should be supplied to IDNR for further guidance.

7.0 DATA VALIDATION AND USABILITY

Validation of the data collected during Phase II assessment of the subject property is included below.

7.1 Representativeness

All samples were collected in the manner and at locations specified in the PSSAC to accurately reflect the constituent concentrations in the media from which they were taken at the time of sampling. Sample locations were biased to focus efforts on areas of the property with the greatest potential to be impacted by on-site and off-site activities.

Representativeness of the data was partially ensured by avoiding cross-contamination, adhering to standard sample handling and analytical procedures, and use of proper chain-of-custody documentation procedures.

Field duplicates were collected and evaluated to assure samples were representative of the sampling point. Field duplicate analysis is included in Section 7.5.

7.2 Comparability

In order that one set of data may be compared with another, all analyses were performed by accepted EPA or state methods, and all analytical results were reported in similar concentration units and format.

7.3 Completeness

In order for a set of data to be used with confidence to make a decision, the data must be complete. The sampling design included the collection of samples from the area of the property most likely to have been impacted by on-site and off-site activities. All soil samples were collected as specified in the PSSAC, but only one of the three proposed groundwater samples were collected; therefore, the data set is incomplete.

7.4 Sensitivity

Detection and quantification limits for sample data must be below the Statewide Standard action levels specified in IAC 137. The Iowa Department of Natural Resources (IDNR) acknowledges many of the statewide standard limits cannot be achieved by routine commercial laboratory analysis and chooses to use the laboratory reporting limit for the action limit for project decisions. Method specific laboratory MDLs were identified in Attachment 2.4 of the PSSAC.

7.5 Precision

Precision is a measure of the variability of a measurement system. Precision was assessed through the collection and evaluation of field quality control samples. Precision is typically an estimate by means of duplicate measurements and is expressed in terms of relative percent difference (RPD). The goal for precision of field duplicate results is ± 50 percent RPD for soil samples and ± 35 percent RPD for water samples.

The relative percent difference (RPD) between the primary and corresponding duplicate sample will be calculated using the below formula.

$$RPD = \left[\frac{2 \times (C_1 - C_2)}{(C_1 + C_2)} \right] \times 100$$

where: RPD = Relative percent difference

C_1 = Larger of the two observed measurement values

C_2 = Smaller of the two observed measurement values

Duplicate groundwater samples were not collected from the Former Depot Property, but a duplicate sample was collected from another property during the same mobilization. A duplicate was collected for soil from SMC-3. The RPDs are presented in Tables 4 and 5.

Table 4
Relative Percent Difference –Soil (mg/kg)

Location	Contaminant	Sample Concentration	Duplicate Concentration	RPD
Depot-3	VOCs	ND	ND	NC
	TEH as Diesel	38	46.1	19.26
	TEH as Motor Oil	34.7	39.7	13.44

Table 5
Relative Percent Difference –Groundwater (mg/l)

Location	Contaminant	Sample Concentration	Duplicate Concentration	RPD
SMC-2	Benzene	0.00384	0.00409	6.31
	Ethylbenzene	0.0327	0.0339	3.60
	Toluene	0.0175	0.017	2.90
	Xylene	0.0324	0.0305	6.04
	TEH as Diesel	1.08	1.23	12.99
	TEH as Gasoline	5.09	6.12	18.38
	TEH as Motor Oil	0.448	0.488	8.55
	TEH, total	6.62	7.83	16.75

The RPD values were not outside the respective goals for the samples obtained. The following methods were implemented in Phase II ESAs to minimize the RPDs in soil.

- Take the duplicate in the immediate area of the original sample,
- collect the duplicate sample at the same time as the original sample, and
- avoid taking samples from areas of sand seams or other non-homogenous soils, whenever possible based on recovery.

7.6 Accuracy

Trip blanks were used to evaluate the purity of sample containers, chemical preservatives, and sampling equipment. Methyl Ethyl Ketone and Methylene Chloride were detected in the trip blank associated with the SMC samples. The compounds were detected at concentrations below the statewide standards. Neither compound was detected in the groundwater samples collected at the site. The presence of these compounds in the trip blank does not change the recommendations.

A field blank was also collected in association with the Depot samples. Two PAHs and

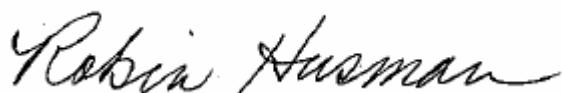
four VOCs were detected in the field blank at concentrations below the statewide standards. Of these compounds only acetone, a known laboratory contaminant, was detected in site samples. The presence of these compounds on the field blank does not change the recommendations.

All sampling and analytical activities were conducted in accordance with EPA approved methods or industry standard practices.

8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We declare, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the *subject site*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Signatures of the environmental professionals responsible for this report:



Robin Husman, Project Manager, Technical Review



Dian Pals, Project Scientist, Quality Control and Assurance



Bridget Wolfe, Staff Scientist, Report Preparer

APPENDIX A
QUALIFICATIONS

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

COMPANY QUALIFICATIONS

Howard R. Green Company is a multi-disciplined consulting engineering firm providing services in the civil, environmental, structural, mechanical and electrical engineering disciplines. The firm, founded in 1913, serves Midwest cities, utilities, industries, and various state and federal agencies. The home office is located in Cedar Rapids, Iowa, with branch offices in Des Moines and Sioux City, Iowa; Saint Paul, Minnesota; St. Louis, Missouri; Sioux Falls, South Dakota; Houston, Texas; York, Pennsylvania; and in McHenry, New Lenox, Yorkville, Chicago and Moline, Illinois. The firm currently employs approximately 400 architects, engineers, planners, scientists, surveyors, technicians, and support staff.

Howard R. Green Company has completed environmental site assessments and property transfer evaluations for a variety of public and private clients in Iowa, Minnesota, Missouri, South Dakota, and Wisconsin. The firm is experienced in multiple phases of environmental services, including site assessments, contaminant release investigations, and remediation programs. Additionally, hazardous materials management, permit compliance, solid waste management, storm water management, and underground storage tank system management services are provided by the firm.

QUALIFICATIONS OF INDIVIDUALS PREPARING THIS REPORT

Ms. Bridget Wolfe is an Environmental Scientist with experience on Phase I and Phase II environmental site assessments. She has worked on multiple Brownfield redevelopment projects as well as soil and groundwater sampling events. Ms. Wolfe holds two Bachelor of Science Degrees in Geology and Geological Engineering. Ms. Wolfe is also 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) certified.

Ms. Diane Pals is a Project Scientist II with experience with a variety of environmental projects including Phase I Environmental Site Assessments Brownfields site assessments, remediation oversight, stormwater sampling, Iowa Land Recycling Program, Iowa Risk Based Corrective Action Program, former manufactured gas plant site, and project management of municipal solid waste reduction studies. Diane is 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) and HAZWOPER supervisor certified.

Ms. Robin Husman is an Environmental Geologist with over 20 years experience conducting Phase I and II Environmental Site Assessments along with project management of hazardous waste and petroleum site investigations and cleanup. Robin is 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) and HAZWOPER supervisor certified.

APPENDIX B

FIGURES

Figure 1 – Site Vicinity Map

Figure 2 – Sample Location Map

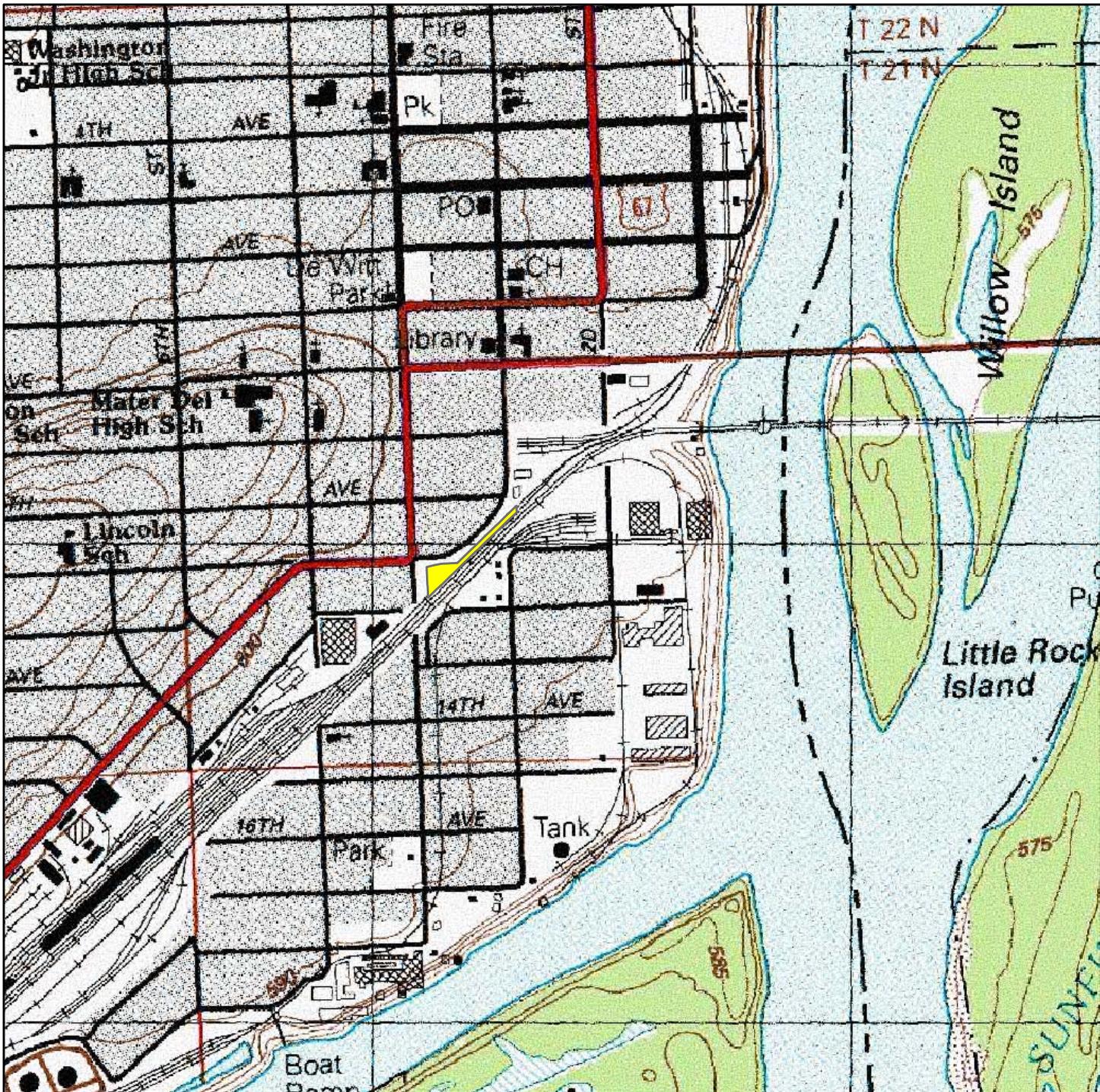
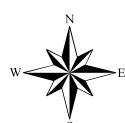


FIGURE 1
Site Vicinity Map

Former Rail Depot
325 11th Avenue South

City of Clinton
Clinton County, Iowa

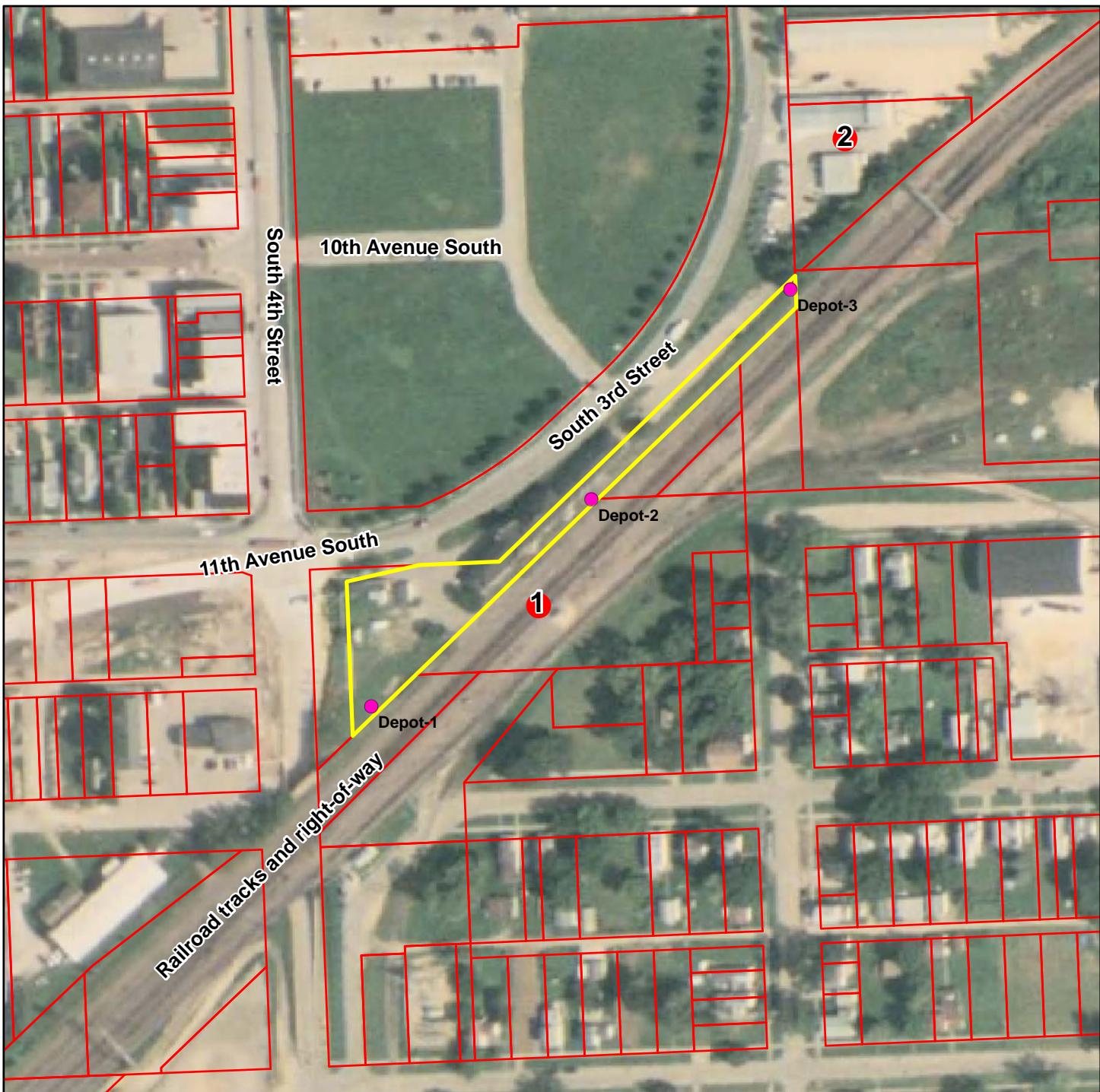


0 500 1,000
Feet

1 inch = 1,000 feet



Howard R. Green Company



- Boring Location
- REC Location
- Subject Property

FIGURE 2
Sample Location Map

1. Railroad tracks and right-of-way
2. 10th Avenue South and South 3rd Street
City of Clinton Streets Department Storage
and former railroad repair shop and yard

325 11th Avenue South

City of Clinton
Clinton County, Iowa



0 200
Feet

1 inch = 200 feet



Howard R. Green Company

APPENDIX C

LABORATORY REPORTS/CHAIN OF CUSTODY DOCUMENTATION

January 17, 2011

Client:

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404

Work Order: CUA0222
Project Name: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Attn: Robin Husman

Date Received: 01/06/11

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Depot-1 0-2.5'	CUA0222-01	01/04/11 15:59
Depot-1 10-12.5'	CUA0222-02	01/04/11 16:17
Depot-2 0-2.5'	CUA0222-03	01/04/11 16:34
Depot-2 12.5-13.5'	CUA0222-04	01/04/11 16:44
Depot-3 5-7.5'	CUA0222-05	01/05/11 08:54
DUP-1	CUA0222-06	01/05/11
Depot-2	CUA0222-07	01/04/11 17:00
Field Blank	CUA0222-08	01/05/11 08:10

Samples were received into laboratory at a temperature of 5.40 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method							
Sample ID: CUA0222-01 (Depot-1 0-2.5' - Soil)						Sampled: 01/04/11 15:59		Recv: 01/06/11 08:55									
Sampled By: Bridget Wolfe						Phone	(319) 841-4424										
General Chemistry Parameters																	
% Solids																	
PAH Compounds by SIM GCMS																	
Acenaphthene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Acenaphthylene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Anthracene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Benzo (a) anthracene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Benzo (b) fluoranthene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Benzo (k) fluoranthene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Benzo (a) pyrene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Benzo (g,h,i) perylene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Chrysene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Dibenz (a,h) anthracene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Fluoranthene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Fluorene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Indeno (1,2,3-cd) pyrene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
2-Methylnaphthalene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Naphthalene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Phenanthrene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Pyrene	<0.0104		mg/kg dry	0.0104	0.991	01/13/11 16:30	ztb	11A0220	SW 8270C								
Surr: 2-Fluorobiphenyl (45-110%)	68 %																
Surr: Nitrobenzene-d5 (40-120%)	68 %																
Surr: Terphenyl-d14 (25-150%)	90 %																

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-02 (Depot-1 10-12.5' - Soil)										
Sampled By: Bridget Wolfe										
Sampled: 01/04/11 16:17 Recvd: 01/06/11 08:55										
General Chemistry Parameters										
% Solids	86.5		%	0.100	1	01/06/11 16:00	sas	11A0272	SM 2540 G	
Volatile Organic Compounds										
Acetone	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Acrylonitrile	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Benzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Bromobenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Bromochloromethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Bromodichloromethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Bromoform	<7.87		ug/kg dry	7.87	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Bromomethane	<15.7		ug/kg dry	15.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
2-Butanone (MEK)	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
n-Butylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
sec-Butylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
tert-Butylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Carbon disulfide	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Carbon Tetrachloride	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Chlorobenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Chlorodibromomethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Chloroethane	<15.7		ug/kg dry	15.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Chloroform	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Chloromethane	<15.7		ug/kg dry	15.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
2-Chlorotoluene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
4-Chlorotoluene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2-Dibromo-3-chloropropane	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2-Dibromoethane (EDB)	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Dibromomethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2-Dichlorobenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,3-Dichlorobenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,4-Dichlorobenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Dichlorodifluoromethane	<11.8		ug/kg dry	11.8	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1-Dichloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2-Dichloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1-Dichloroethene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
cis-1,2-Dichloroethene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
trans-1,2-Dichloroethene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2-Dichloropropane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,3-Dichloropropane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
2,2-Dichloropropane	<15.7		ug/kg dry	15.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1-Dichloropropene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
cis-1,3-Dichloropropene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
trans-1,3-Dichloropropene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Ethylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Hexachlorobutadiene	<19.7		ug/kg dry	19.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Hexane	<19.7		ug/kg dry	19.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Isopropylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
p-Isopropyltoluene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Methylene Chloride	<39.4		ug/kg dry	39.4	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-02 (Depot-1 10-12.5' - Soil) - cont.										
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Naphthalene	<19.7		ug/kg dry	19.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
n-Propylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Styrene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1,1,2-Tetrachloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1,2,2-Tetrachloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Tetrachloroethene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Toluene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2,3-Trichlorobenzene	<19.7		ug/kg dry	19.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2,4-Trichlorobenzene	<19.7		ug/kg dry	19.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1,1-Trichloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,1,2-Trichloroethane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Trichloroethylene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Trichlorofluoromethane	<15.7		ug/kg dry	15.7	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2,3-Trichloropropane	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,2,4-Trimethylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
1,3,5-Trimethylbenzene	<3.94		ug/kg dry	3.94	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Vinyl chloride	<11.8		ug/kg dry	11.8	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Xylenes, total	<11.8		ug/kg dry	11.8	0.681	01/11/11 15:58	EEE	11A0336	SW 8260B	
Surr: Dibromo ^f luoromethane (75-125%)	95 %									
Surr: Toluene-d8 (80-120%)	97 %									
Surr: 4-Bromofluorobenzene (80-120%)	102 %									
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	<10.0		mg/kg	10.0	1	01/10/11 21:00	jdb	[CALC]	OA-2 - 8015B	
Diesel	<10.0		mg/kg	10.0	0.987	01/10/11 21:00	jdb	11A0219	OA-2 - 8015B	
Gasoline	<10.0		mg/kg	10.0	0.987	01/10/11 21:00	jdb	11A0219	OA-2 - 8015B	
Motor Oil	<10.0		mg/kg	10.0	0.987	01/10/11 21:00	jdb	11A0219	OA-2 - 8015B	
Surr: Octacosane (50-150%)	110 %									

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method							
Sample ID: CUA0222-03 (Depot-2 0-2.5' - Soil)						Sampled: 01/04/11 16:34		Recv: 01/06/11 08:55									
Sampled By: Bridget Wolfe						Phone	(319) 841-4424										
General Chemistry Parameters																	
% Solids																	
PAH Compounds by SIM GCMS																	
Acenaphthene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Acenaphthylene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Anthracene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Benzo (a) anthracene	0.0237		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Benzo (b) fluoranthene	0.0461		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Benzo (k) fluoranthene	0.0114		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Benzo (a) pyrene	0.0370		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Benzo (g,h,i) perylene	0.0415		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Chrysene	0.0292		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Dibenzo (a,h) anthracene	0.0124		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Fluoranthene	0.0417		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Fluorene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Indeno (1,2,3-cd) pyrene	0.0323		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
2-Methylnaphthalene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Naphthalene	<0.0106		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Phenanthrene	0.0136		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Pyrene	0.0398		mg/kg dry	0.0106	0.993	01/13/11 17:48	ztb	11A0220	SW 8270C								
Surr: 2-Fluorobiphenyl (45-110%)	72 %																
Surr: Nitrobenzene-d5 (40-120%)	73 %																
Surr: Terphenyl-d14 (25-150%)	102 %																

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-04 (Depot-2 12.5-13.5' - Soil)										
Sampled By: Bridget Wolfe										
Sampled: 01/04/11 16:44										
Phone (319) 841-4424										
General Chemistry Parameters										
% Solids	79.2	%		0.100	1		01/06/11 16:00	sas	11A0272	SM 2540 G
Volatile Organic Compounds										
Acetone	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Acrylonitrile	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Benzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Bromobenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Bromochloromethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Bromodichloromethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Bromoform	<10.3	ug/kg dry		10.3	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Bromomethane	<20.7	ug/kg dry		20.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
2-Butanone (MEK)	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
n-Butylbenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
sec-Butylbenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
tert-Butylbenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Carbon disulfide	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Carbon Tetrachloride	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Chlorobenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Chlorodibromomethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Chloroethane	<20.7	ug/kg dry		20.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Chloroform	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Chloromethane	<20.7	ug/kg dry		20.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
2-Chlorotoluene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
4-Chlorotoluene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,2-Dibromo-3-chloropropane	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,2-Dibromoethane (EDB)	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Dibromomethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,2-Dichlorobenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,3-Dichlorobenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,4-Dichlorobenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Dichlorodifluoromethane	<15.5	ug/kg dry		15.5	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,1-Dichloroethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,2-Dichloroethane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,1-Dichloroethene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
cis-1,2-Dichloroethene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
trans-1,2-Dichloroethene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,2-Dichloropropane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,3-Dichloropropane	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
2,2-Dichloropropane	<20.7	ug/kg dry		20.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
1,1-Dichloropropene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
cis-1,3-Dichloropropene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
trans-1,3-Dichloropropene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Ethylbenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Hexachlorobutadiene	<25.8	ug/kg dry		25.8	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Hexane	<25.8	ug/kg dry		25.8	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Isopropylbenzene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
p-Isopropyltoluene	<5.17	ug/kg dry		5.17	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B
Methylene Chloride	<51.7	ug/kg dry		51.7	0.818		01/11/11 16:31	EEE	11A0336	SW 8260B

TestAmerica Cedar Falls

Angela Muehling
 Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-04 (Depot-2 12.5-13.5' - Soil) - cont.										
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Naphthalene	<25.8		ug/kg dry	25.8	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
n-Propylbenzene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Styrene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,1,1,2-Tetrachloroethane	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,1,2,2-Tetrachloroethane	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Tetrachloroethene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Toluene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,2,3-Trichlorobenzene	<25.8		ug/kg dry	25.8	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,2,4-Trichlorobenzene	<25.8		ug/kg dry	25.8	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,1,1-Trichloroethane	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,1,2-Trichloroethane	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Trichloroethylene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Trichlorofluoromethane	<20.7		ug/kg dry	20.7	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,2,3-Trichloropropane	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,2,4-Trimethylbenzene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
1,3,5-Trimethylbenzene	<5.17		ug/kg dry	5.17	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Vinyl chloride	<15.5		ug/kg dry	15.5	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Xylenes, total	<15.5		ug/kg dry	15.5	0.818	01/11/11 16:31	EEE	11A0336	SW 8260B	
Surr: DibromoFluoromethane (75-125%)	94 %									
Surr: Toluene-d8 (80-120%)	97 %									
Surr: 4-Bromofluorobenzene (80-120%)	104 %									
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	<10.0		mg/kg	10.0	1	01/10/11 21:42	jdb	[CALC]	OA-2 - 8015B	
Diesel	<10.0		mg/kg	10.0	0.98	01/10/11 21:42	jdb	11A0219	OA-2 - 8015B	
Gasoline	<10.0		mg/kg	10.0	0.98	01/10/11 21:42	jdb	11A0219	OA-2 - 8015B	
Motor Oil	<10.0		mg/kg	10.0	0.98	01/10/11 21:42	jdb	11A0219	OA-2 - 8015B	
Surr: Octacosane (50-150%)	115 %									

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-05 (Depot-3 5-7.5' - Soil)										
Sampled By: Bridget Wolfe										
Sampled: 01/05/11 08:54 Recvd: 01/06/11 08:55										
General Chemistry Parameters										
% Solids	70.5		%	0.100	1	01/06/11 16:00	sas	11A0272	SM 2540 G	
Volatile Organic Compounds										
Acetone	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Acrylonitrile	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Benzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Bromobenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Bromochloromethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Bromodichloromethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Bromoform	<14.2		ug/kg dry	14.2	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Bromomethane	<28.4		ug/kg dry	28.4	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
2-Butanone (MEK)	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
n-Butylbenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
sec-Butylbenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
tert-Butylbenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Carbon disulfide	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Carbon Tetrachloride	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Chlorobenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Chlorodibromomethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Chloroethane	<28.4		ug/kg dry	28.4	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Chloroform	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Chloromethane	<28.4		ug/kg dry	28.4	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
2-Chlorotoluene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
4-Chlorotoluene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,2-Dibromo-3-chloropropane	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,2-Dibromoethane (EDB)	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Dibromomethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,2-Dichlorobenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,3-Dichlorobenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,4-Dichlorobenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Dichlorodifluoromethane	<21.3		ug/kg dry	21.3	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,1-Dichloroethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,2-Dichloroethane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,1-Dichloroethene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
cis-1,2-Dichloroethene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
trans-1,2-Dichloroethene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,2-Dichloropropane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,3-Dichloropropane	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
2,2-Dichloropropane	<28.4		ug/kg dry	28.4	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
1,1-Dichloropropene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
cis-1,3-Dichloropropene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
trans-1,3-Dichloropropene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Ethylbenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Hexachlorobutadiene	<35.5		ug/kg dry	35.5	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Hexane	<35.5		ug/kg dry	35.5	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Isopropylbenzene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
p-Isopropyltoluene	<7.10		ug/kg dry	7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	
Methylene Chloride	<71.0		ug/kg dry	71.0	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B	

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-05 (Depot-3 5-7.5' - Soil) - cont.						Sampled: 01/05/11 08:54		Recv'd: 01/06/11 08:55		
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Naphthalene	<35.5		ug/kg dry		35.5	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
n-Propylbenzene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Styrene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,1,1,2-Tetrachloroethane	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,1,2,2-Tetrachloroethane	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Tetrachloroethene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Toluene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,2,3-Trichlorobenzene	<35.5		ug/kg dry		35.5	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,2,4-Trichlorobenzene	<35.5		ug/kg dry		35.5	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,1,1-Trichloroethane	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,1,2-Trichloroethane	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Trichloroethylene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Trichlorofluoromethane	<28.4		ug/kg dry		28.4	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,2,3-Trichloropropane	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,2,4-Trimethylbenzene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
1,3,5-Trimethylbenzene	<7.10		ug/kg dry		7.10	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Vinyl chloride	<21.3		ug/kg dry		21.3	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Xylenes, total	<21.3		ug/kg dry		21.3	1.06	01/11/11 17:05	EEE	11A0336	SW 8260B
Surr: Dibromo/fluoromethane (75-125%)	92 %									
Surr: Toluene-d8 (80-120%)	98 %									
Surr: 4-Bromofluorobenzene (80-120%)	98 %									
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	72.7		mg/kg		10.0	1	01/10/11 22:24	jdb	[CALC]	OA-2 - 8015B
Diesel	38.0		mg/kg		10.0	0.983	01/10/11 22:24	jdb	11A0219	OA-2 - 8015B
Gasoline	<10.0		mg/kg		10.0	0.983	01/10/11 22:24	jdb	11A0219	OA-2 - 8015B
Motor Oil	34.7		mg/kg		10.0	0.983	01/10/11 22:24	jdb	11A0219	OA-2 - 8015B
Surr: Octacosane (50-150%)	113 %									

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method	
Sample ID: CUA0222-06 (DUP-1 - Soil)						Sampled: 01/05/11		Recv'd: 01/06/11 08:55			
Sampled By: Bridget Wolfe						Phone (319) 841-4424					
General Chemistry Parameters											
% Solids	74.4		%	0.100	1	01/11/11 16:00	sas	11A0272	SM 2540 G		
Volatile Organic Compounds											
Acetone	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Acrylonitrile	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Benzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Bromobenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Bromochloromethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Bromodichloromethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Bromoform	<12.0		ug/kg dry	12.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Bromomethane	<24.0		ug/kg dry	24.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
2-Butanone (MEK)	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
n-Butylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
sec-Butylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
tert-Butylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Carbon disulfide	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Carbon Tetrachloride	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Chlorobenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Chlorodibromomethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Chloroethane	<24.0		ug/kg dry	24.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Chloroform	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Chloromethane	<24.0		ug/kg dry	24.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
2-Chlorotoluene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
4-Chlorotoluene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,2-Dibromo-3-chloropropane	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,2-Dibromoethane (EDB)	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Dibromomethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,2-Dichlorobenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,3-Dichlorobenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,4-Dichlorobenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Dichlorodifluoromethane	<18.0		ug/kg dry	18.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,1-Dichloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,2-Dichloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,1-Dichloroethene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
cis-1,2-Dichloroethene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
trans-1,2-Dichloroethene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,2-Dichloropropane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,3-Dichloropropane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
2,2-Dichloropropane	<24.0		ug/kg dry	24.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
1,1-Dichloropropene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
cis-1,3-Dichloropropene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
trans-1,3-Dichloropropene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Ethylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Hexachlorobutadiene	<30.0		ug/kg dry	30.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Hexane	<30.0		ug/kg dry	30.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Isopropylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
p-Isopropyltoluene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		
Methylene Chloride	<60.0		ug/kg dry	60.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B		

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-06 (DUP-1 - Soil) - cont.						Sampled: 01/05/11		Recv'd: 01/06/11 08:55		
Volatile Organic Compounds - cont.										
Methyl tert-Butyl Ether	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Naphthalene	<30.0		ug/kg dry	30.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
n-Propylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Styrene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,1,1,2-Tetrachloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,1,2,2-Tetrachloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Tetrachloroethene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Toluene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,2,3-Trichlorobenzene	<30.0		ug/kg dry	30.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,2,4-Trichlorobenzene	<30.0		ug/kg dry	30.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,1,1-Trichloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,1,2-Trichloroethane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Trichloroethylene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Trichlorofluoromethane	<24.0		ug/kg dry	24.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,2,3-Trichloropropane	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,2,4-Trimethylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
1,3,5-Trimethylbenzene	<6.00		ug/kg dry	6.00	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Vinyl chloride	<18.0		ug/kg dry	18.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Xylenes, total	<18.0		ug/kg dry	18.0	0.893	01/11/11 19:20	EEE	11A0336	SW 8260B	
Surr: Dibromo/fluoromethane (75-125%)	95 %									
Surr: Toluene-d8 (80-120%)	97 %									
Surr: 4-Bromofluorobenzene (80-120%)	96 %									
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	85.8		mg/kg	10.0	1	01/10/11 23:07	jdb	[CALC]	OA-2 - 8015B	
Diesel	46.1		mg/kg	10.0	0.982	01/10/11 23:07	jdb	11A0219	OA-2 - 8015B	
Gasoline	<10.0		mg/kg	10.0	0.982	01/10/11 23:07	jdb	11A0219	OA-2 - 8015B	
Motor Oil	39.7		mg/kg	10.0	0.982	01/10/11 23:07	jdb	11A0219	OA-2 - 8015B	
Surr: Octacosane (50-150%)	143 %									

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-07 (Depot-2 - Ground Water)										
Sampled By:	Bridget Wolfe				Phone	(319) 841-4424				
Volatile Organic Compounds										
Acetone	5.22	J	ug/L	1.79	10.0	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Acrylonitrile	<0.190		ug/L	0.190	10.0	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Benzene	<0.110		ug/L	0.110	0.500	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Bromobenzene	<0.210	CIN	ug/L	0.210	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Bromochloromethane	<0.120		ug/L	0.120	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Bromodichloromethane	<0.120		ug/L	0.120	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Bromoform	<0.140		ug/L	0.140	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Bromomethane	<0.220		ug/L	0.220	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
2-Butanone (MEK)	1.24	J	ug/L	0.160	10.0	1	01/07/11 11:17	sjn	11A0233	SW 8260B
n-Butylbenzene	<0.370		ug/L	0.370	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
sec-Butylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
tert-Butylbenzene	<0.120		ug/L	0.120	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Carbon disulfide	<0.150		ug/L	0.150	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Carbon Tetrachloride	<0.240		ug/L	0.240	2.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Chlorobenzene	<0.190	CIN	ug/L	0.190	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Chlorodibromomethane	<0.200		ug/L	0.200	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Chloroethane	<0.150		ug/L	0.150	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Chloroform	<0.280		ug/L	0.280	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Chloromethane	0.480	J	ug/L	0.310	3.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
2-Chlorotoluene	<0.120	CIN	ug/L	0.120	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
4-Chlorotoluene	<0.130		ug/L	0.130	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2-Dibromo-3-chloropropane	<0.120		ug/L	0.120	10.0	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2-Dibromoethane (EDB)	<0.130		ug/L	0.130	10.0	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Dibromomethane	<0.180		ug/L	0.180	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2-Dichlorobenzene	<0.140		ug/L	0.140	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,3-Dichlorobenzene	0.250	J	ug/L	0.170	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,4-Dichlorobenzene	<0.200		ug/L	0.200	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Dichlorodifluoromethane	<0.200		ug/L	0.200	3.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1-Dichloroethane	<0.210		ug/L	0.210	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2-Dichloroethane	<0.180		ug/L	0.180	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1-Dichloroethene	<0.150		ug/L	0.150	2.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
cis-1,2-Dichloroethene	<0.130		ug/L	0.130	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
trans-1,2-Dichloroethene	<0.210		ug/L	0.210	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2-Dichloropropane	<0.110		ug/L	0.110	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,3-Dichloropropane	<0.160	CIN	ug/L	0.160	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
2,2-Dichloropropane	<0.180		ug/L	0.180	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1-Dichloropropene	<0.150		ug/L	0.150	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
cis-1,3-Dichloropropene	<0.150		ug/L	0.150	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
trans-1,3-Dichloropropene	<0.220		ug/L	0.220	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Ethylbenzene	<0.210		ug/L	0.210	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Hexachlorobutadiene	<0.200		ug/L	0.200	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Hexane	<0.200		ug/L	0.200	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Isopropylbenzene	<0.190		ug/L	0.190	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
p-Isopropyltoluene	<0.140		ug/L	0.140	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Methylene Chloride	<0.170		ug/L	0.170	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Methyl tert-Butyl Ether	<0.160		ug/L	0.160	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Naphthalene	<0.370		ug/L	0.370	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-07 (Depot-2 - Ground Water) - cont.										
Volatile Organic Compounds - cont.										
n-Propylbenzene	<0.100		ug/L	0.100	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Styrene	<0.100		ug/L	0.100	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1,1,2-Tetrachloroethane	<0.210		ug/L	0.210	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1,2,2-Tetrachloroethane	<0.100	CIN	ug/L	0.100	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Tetrachloroethene	<0.180		ug/L	0.180	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Toluene	<0.150		ug/L	0.150	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2,3-Trichlorobenzene	<0.160		ug/L	0.160	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2,4-Trichlorobenzene	<0.160		ug/L	0.160	5.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1,1-Trichloroethane	<0.120		ug/L	0.120	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,1,2-Trichloroethane	<0.120	CIN	ug/L	0.120	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Trichloroethene	<0.190		ug/L	0.190	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Trichlorofluoromethane	<0.170		ug/L	0.170	4.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2,3-Trichloropropane	<0.190	CIN	ug/L	0.190	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,2,4-Trimethylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
1,3,5-Trimethylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Vinyl chloride	<0.100		ug/L	0.100	1.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Xylenes, total	<0.130		ug/L	0.130	3.00	1	01/07/11 11:17	sjn	11A0233	SW 8260B
Surr: Dibromoiodomethane (75-120%)	96 %									
Surr: Toluene-d8 (80-120%)	96 %									
Surr: 4-Bromofluorobenzene (75-110%)	100 %									
VOC Preservation Check										
pH	<2.00		units		2.00	1	01/10/11 11:57	eee	11A0256	SW
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	1430		ug/L		333	1	01/12/11 02:37	jdb	[CALC]	OA-2 - 8015B
Diesel	<333		ug/L		333	1.11	01/12/11 02:37	jdb	11A0193	OA-2 - 8015B
Gasoline	<333		ug/L		333	1.11	01/12/11 02:37	jdb	11A0193	OA-2 - 8015B
Motor Oil	1430		ug/L		333	1.11	01/12/11 02:37	jdb	11A0193	OA-2 - 8015B
Surr: Octacosane (55-150%)	55 %									

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
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Sample ID: CUA0222-08 (Field Blank - Water)

Sampled By: Bridget Wolfe

Phone (319) 841-4424

Sampled: 01/05/11 08:10

Recv'd: 01/06/11 08:55

Total Metals by SW 846 Series Methods

Arsenic	<0.00100		mg/L	0.00100	1	01/12/11 09:48	kmd	11A0240	SW 7060A
Barium	<0.0100		mg/L	0.0100	1	01/07/11 22:00	cjt	11A0216	SW 6010B
Cadmium	<0.000500		mg/L	0.000500	1	01/10/11 19:33	sns	11A0240	SW 7131A
Chromium	<0.0200		mg/L	0.0200	1	01/07/11 22:00	cjt	11A0216	SW 6010B
Lead	<0.00400		mg/L	0.00400	1	01/11/11 09:50	kmd	11A0240	SW 7421
Mercury	<0.000200		mg/L	0.000200	1	01/11/11 13:28	kmd	11A0282	SW 7470A
Selenium	<0.00500		mg/L	0.00500	1	01/12/11 20:43	sns	11A0240	SW 7740
Silver	<0.0200		mg/L	0.0200	1	01/07/11 22:00	cjt	11A0216	SW 6010B

Volatile Organic Compounds

Acetone	3.40	J	ug/L	1.79	10.0	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Acrylonitrile	<0.190		ug/L	0.190	10.0	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Benzene	0.110	J	ug/L	0.110	0.500	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Bromobenzene	<0.210	CIN	ug/L	0.210	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Bromochloromethane	<0.120		ug/L	0.120	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Bromodichloromethane	<0.120		ug/L	0.120	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Bromoform	<0.140		ug/L	0.140	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Bromomethane	<0.220		ug/L	0.220	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
2-Butanone (MEK)	<0.160		ug/L	0.160	10.0	1	01/07/11 10:33	sjn	11A0233	SW 8260B
n-Butylbenzene	<0.370		ug/L	0.370	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
sec-Butylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
tert-Butylbenzene	<0.120		ug/L	0.120	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Carbon disulfide	<0.150		ug/L	0.150	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Carbon Tetrachloride	<0.240		ug/L	0.240	2.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Chlorobenzene	<0.190	CIN	ug/L	0.190	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Chlorodibromomethane	<0.200		ug/L	0.200	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Chloroethane	<0.150		ug/L	0.150	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Chloroform	<0.280		ug/L	0.280	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Chloromethane	<0.310		ug/L	0.310	3.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
2-Chlorotoluene	<0.120	CIN	ug/L	0.120	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
4-Chlorotoluene	<0.130		ug/L	0.130	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2-Dibromo-3-chloropropane	<0.120		ug/L	0.120	10.0	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2-Dibromoethane (EDB)	<0.130		ug/L	0.130	10.0	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Dibromomethane	<0.180		ug/L	0.180	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2-Dichlorobenzene	<0.140		ug/L	0.140	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,3-Dichlorobenzene	<0.170		ug/L	0.170	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,4-Dichlorobenzene	<0.200		ug/L	0.200	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Dichlorodifluoromethane	<0.200		ug/L	0.200	3.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1-Dichloroethane	<0.210		ug/L	0.210	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2-Dichloroethane	<0.180		ug/L	0.180	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1-Dichloroethene	<0.150		ug/L	0.150	2.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
cis-1,2-Dichloroethene	<0.130		ug/L	0.130	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
trans-1,2-Dichloroethene	<0.210		ug/L	0.210	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2-Dichloropropane	<0.110		ug/L	0.110	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,3-Dichloropropane	<0.160	CIN	ug/L	0.160	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
2,2-Dichloropropane	<0.180		ug/L	0.180	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1-Dichloropropene	<0.150		ug/L	0.150	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
cis-1,3-Dichloropropene	<0.150		ug/L	0.150	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B

TestAmerica Cedar Falls

Angela Muehling

Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-08 (Field Blank - Water) - cont.										
Volatile Organic Compounds - cont.										
trans-1,3-Dichloropropene	<0.220		ug/L	0.220	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Ethylbenzene	<0.210		ug/L	0.210	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Hexachlorobutadiene	<0.200		ug/L	0.200	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Hexane	<0.200		ug/L	0.200	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Isopropylbenzene	<0.190		ug/L	0.190	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
p-Isopropyltoluene	<0.140		ug/L	0.140	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Methylene Chloride	2.26	J	ug/L	0.170	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Methyl tert-Butyl Ether	<0.160		ug/L	0.160	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Naphthalene	<0.370		ug/L	0.370	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
n-Propylbenzene	<0.100		ug/L	0.100	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Styrene	<0.100		ug/L	0.100	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1,1,2-Tetrachloroethane	<0.210		ug/L	0.210	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1,2,2-Tetrachloroethane	<0.100	CIN	ug/L	0.100	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Tetrachloroethene	<0.180		ug/L	0.180	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Toluene	0.240	J	ug/L	0.150	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2,3-Trichlorobenzene	<0.160		ug/L	0.160	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2,4-Trichlorobenzene	<0.160		ug/L	0.160	5.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1,1-Trichloroethane	<0.120		ug/L	0.120	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,1,2-Trichloroethane	<0.120	CIN	ug/L	0.120	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Trichloroethene	<0.190		ug/L	0.190	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Trichlorofluoromethane	<0.170		ug/L	0.170	4.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2,3-Trichloropropane	<0.190	CIN	ug/L	0.190	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,2,4-Trimethylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
1,3,5-Trimethylbenzene	<0.200		ug/L	0.200	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Vinyl chloride	<0.100		ug/L	0.100	1.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
Xylenes, total	<0.130		ug/L	0.130	3.00	1	01/07/11 10:33	sjn	11A0233	SW 8260B
<i>Surr: Dibromofluoromethane (75-120%)</i>	95 %									
<i>Surr: Toluene-d8 (80-120%)</i>	99 %									
<i>Surr: 4-Bromofluorobenzene (75-110%)</i>	96 %									
PAH Compounds by SIM GCMS										
Acenaphthene	<0.0870	RL1	ug/L	0.0870	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Acenaphthylene	<0.0950	RL1	ug/L	0.0950	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Anthracene	<0.170	RL1	ug/L	0.170	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Benzo (a) anthracene	0.167	RL1,J	ug/L	0.0920	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Benzo (b) fluoranthene	<0.0760	RL1	ug/L	0.0760	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Benzo (k) fluoranthene	<0.0770	RL1	ug/L	0.0770	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Benzo (a) pyrene	<0.160	RL1	ug/L	0.160	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Benzo (g,h,i) perylene	<0.0810	RL1	ug/L	0.0810	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Chrysene	<0.0700	RL1	ug/L	0.0700	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Dibenzo (a,h) anthracene	<0.0810	RL1	ug/L	0.0810	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Fluoranthene	<0.0850	RL1	ug/L	0.0850	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Fluorene	<0.100	RL1	ug/L	0.100	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Indeno (1,2,3-cd) pyrene	<0.110	RL1	ug/L	0.110	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
2-Methylnaphthalene	<0.310	RL1	ug/L	0.310	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Naphthalene	<0.290	RL1	ug/L	0.290	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Phenanthrene	0.162	RL1,J	ug/L	0.140	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
Pyrene	<0.180	RL1	ug/L	0.180	1.00	11	01/13/11 23:48	ztb	11A0262	SW 8270C
<i>Surr: 2-Fluorobiphenyl (30-105%)</i>	64 %	RL1								

TestAmerica Cedar Falls

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HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
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Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUA0222-08 (Field Blank - Water) - cont.										
PAH Compounds by SIM GCMS - cont.										
Surr: Nitrobenzene-d5 (30-115%)	71 %	RLI								
Surr: Terphenyl-d14 (20-150%)	86 %	RLI								
VOC Preservation Check										
pH	<2.00		units		2.00	1	01/10/11 11:57	eee	11A0256	SW
UST ANALYSIS PARAMETERS										
Total Extractable Hydrocarbons	<300		ug/L		300	1	01/10/11 20:50	jdb	[CALC]	OA-2 - 8015B
Diesel	<300		ug/L		300	1.02	01/10/11 20:50	jdb	11A0193	OA-2 - 8015B
Gasoline	<300		ug/L		300	1.02	01/10/11 20:50	jdb	11A0193	OA-2 - 8015B
Motor Oil	<300		ug/L		300	1.02	01/10/11 20:50	jdb	11A0193	OA-2 - 8015B
Surr: Octacosane (55-150%)	101 %									

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Received: 01/06/11
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SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
PAH Compounds by SIM GCMS							
SW 8270C	11A0220	CUA0222-01	30.27	1.00	01/07/11 13:55	KKL	SW 3550B GCMS
SW 8270C	11A0220	CUA0222-03	30.22	1.00	01/07/11 13:55	KKL	SW 3550B GCMS
SW 8270C	11A0262	CUA0222-08	910.00	1.00	01/10/11 14:14	JAR	SW 3510C_MS
Total Metals by SW 846 Series Methods							
SW 6010B	11A0216	CUA0222-08	50.00	50.00	01/07/11 13:07	NAS	SW 3010A
SW 7060A	11A0240	CUA0222-08	50.00	50.00	01/10/11 09:15	KMD	SW 3020A/EPA 200.
SW 7131A	11A0240	CUA0222-08	50.00	50.00	01/10/11 09:15	KMD	SW 3020A/EPA 200.
SW 7421	11A0240	CUA0222-08	50.00	50.00	01/10/11 09:15	KMD	SW 3020A/EPA 200.
SW 7470A	11A0282	CUA0222-08	30.00	30.00	01/11/11 08:25	KMD	EPA 245.2/SW 7470.
SW 7740	11A0240	CUA0222-08	50.00	50.00	01/10/11 09:15	KMD	SW 3020A/EPA 200.
UST ANALYSIS PARAMETERS							
OA-2 - 8015B	[CALC]	CUA0222-02	1.00	1.00	01/07/11 13:54		[CALC]
OA-2 - 8015B	11A0219	CUA0222-02	30.39	1.50	01/07/11 13:54	KKL	SW 3550B GC
OA-2 - 8015B	[CALC]	CUA0222-04	1.00	1.00	01/07/11 13:54		[CALC]
OA-2 - 8015B	11A0219	CUA0222-04	30.61	1.50	01/07/11 13:54	KKL	SW 3550B GC
OA-2 - 8015B	[CALC]	CUA0222-05	1.00	1.00	01/07/11 13:54		[CALC]
OA-2 - 8015B	11A0219	CUA0222-05	30.52	1.50	01/07/11 13:54	KKL	SW 3550B GC
OA-2 - 8015B	[CALC]	CUA0222-06	1.00	1.00	01/07/11 13:54		[CALC]
OA-2 - 8015B	11A0219	CUA0222-06	30.54	1.50	01/07/11 13:54	KKL	SW 3550B GC
OA-2 - 8015B	[CALC]	CUA0222-07	1.00	1.00	01/07/11 08:37		[CALC]
OA-2 - 8015B	11A0193	CUA0222-07	900.00	1.00	01/07/11 08:37	TCH	SW 3510C GC
OA-2 - 8015B	[CALC]	CUA0222-08	1.00	1.00	01/07/11 08:37		[CALC]
OA-2 - 8015B	11A0193	CUA0222-08	980.00	1.00	01/07/11 08:37	TCH	SW 3510C GC

HOWARD R. GREEN CO. - CEDAR RAPIDS <
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Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD Limit	RPD Limit	Q
Total Metals by SW 846 Series Methods													
Barium	11A0216			mg/L	N/A	0.0100	<0.0100						
Chromium	11A0216			mg/L	N/A	0.0200	<0.0200						
Silver	11A0216			mg/L	N/A	0.0200	<0.0200						
Arsenic	11A0240			mg/L	N/A	0.00100	<0.00100						
Cadmium	11A0240			mg/L	N/A	0.000500	<0.000500						
Lead	11A0240			mg/L	N/A	0.00400	<0.00400						
Selenium	11A0240			mg/L	N/A	0.00500	<0.00500						
Mercury	11A0282			mg/L	N/A	0.000200	<0.000200						
Volatile Organic Compounds													
Acetone	11A0233			ug/L	1.79	10.0	<1.79						
Acrylonitrile	11A0233			ug/L	0.190	10.0	<0.190						
Benzene	11A0233			ug/L	0.110	0.500	<0.110						
Bromobenzene	11A0233			ug/L	0.210	1.00	<0.210						CIN
Bromochloromethane	11A0233			ug/L	0.120	5.00	<0.120						
Bromodichloromethane	11A0233			ug/L	0.120	1.00	<0.120						
Bromoform	11A0233			ug/L	0.140	5.00	<0.140						
Bromomethane	11A0233			ug/L	0.220	4.00	<0.220						
2-Butanone (MEK)	11A0233			ug/L	0.160	10.0	<0.160						
n-Butylbenzene	11A0233			ug/L	0.370	1.00	<0.370						
sec-Butylbenzene	11A0233			ug/L	0.200	1.00	<0.200						
tert-Butylbenzene	11A0233			ug/L	0.120	1.00	<0.120						
Carbon disulfide	11A0233			ug/L	0.150	1.00	<0.150						
Carbon Tetrachloride	11A0233			ug/L	0.240	2.00	<0.240						
Chlorobenzene	11A0233			ug/L	0.190	1.00	<0.190						CIN
Chlorodibromomethane	11A0233			ug/L	0.200	5.00	<0.200						
Chloroethane	11A0233			ug/L	0.150	4.00	<0.150						
Chloroform	11A0233			ug/L	0.280	1.00	<0.280						
Chloromethane	11A0233			ug/L	0.310	3.00	<0.310						
2-Chlorotoluene	11A0233			ug/L	0.120	1.00	<0.120						CIN
4-Chlorotoluene	11A0233			ug/L	0.130	1.00	<0.130						
1,2-Dibromo-3-chloropropane	11A0233			ug/L	0.120	10.0	<0.120						
1,2-Dibromoethane (EDB)	11A0233			ug/L	0.130	10.0	<0.130						
Dibromomethane	11A0233			ug/L	0.180	1.00	<0.180						
1,2-Dichlorobenzene	11A0233			ug/L	0.140	1.00	<0.140						
1,3-Dichlorobenzene	11A0233			ug/L	0.170	1.00	<0.170						
1,4-Dichlorobenzene	11A0233			ug/L	0.200	1.00	<0.200						
Dichlorodifluoromethane	11A0233			ug/L	0.200	3.00	<0.200						
1,1-Dichloroethane	11A0233			ug/L	0.210	1.00	<0.210						
1,2-Dichloroethane	11A0233			ug/L	0.180	1.00	<0.180						
1,1-Dichloroethene	11A0233			ug/L	0.150	2.00	<0.150						
cis-1,2-Dichloroethene	11A0233			ug/L	0.130	1.00	<0.130						
trans-1,2-Dichloroethene	11A0233			ug/L	0.210	1.00	<0.210						
1,2-Dichloropropane	11A0233			ug/L	0.110	1.00	<0.110						
1,3-Dichloropropane	11A0233			ug/L	0.160	1.00	<0.160						CIN
2,2-Dichloropropane	11A0233			ug/L	0.180	4.00	<0.180						

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
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Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds													
1,1-Dichloropropene	11A0233			ug/L	0.150	1.00	<0.150						
cis-1,3-Dichloropropene	11A0233			ug/L	0.150	5.00	<0.150						
trans-1,3-Dichloropropene	11A0233			ug/L	0.220	5.00	<0.220						
Ethylbenzene	11A0233			ug/L	0.210	1.00	<0.210						
Hexachlorobutadiene	11A0233			ug/L	0.200	5.00	0.400						J
Hexane	11A0233			ug/L	0.200	1.00	<0.200						
Isopropylbenzene	11A0233			ug/L	0.190	1.00	<0.190						
p-Isopropyltoluene	11A0233			ug/L	0.140	1.00	<0.140						
Methylene Chloride	11A0233			ug/L	0.170	5.00	<0.170						
Methyl tert-Butyl Ether	11A0233			ug/L	0.160	1.00	<0.160						
Naphthalene	11A0233			ug/L	0.370	5.00	0.670						J
n-Propylbenzene	11A0233			ug/L	0.100	1.00	<0.100						
Styrene	11A0233			ug/L	0.100	1.00	<0.100						
1,1,1,2-Tetrachloroethane	11A0233			ug/L	0.210	1.00	<0.210						
1,1,2,2-Tetrachloroethane	11A0233			ug/L	0.100	1.00	<0.100						CIN
Tetrachloroethene	11A0233			ug/L	0.180	1.00	<0.180						
Toluene	11A0233			ug/L	0.150	1.00	<0.150						
1,2,3-Trichlorobenzene	11A0233			ug/L	0.160	5.00	0.810						J
1,2,4-Trichlorobenzene	11A0233			ug/L	0.160	5.00	0.320						J
1,1,1-Trichloroethane	11A0233			ug/L	0.120	1.00	<0.120						
1,1,2-Trichloroethane	11A0233			ug/L	0.120	1.00	<0.120						CIN
Trichloroethene	11A0233			ug/L	0.190	1.00	<0.190						
Trichlorofluoromethane	11A0233			ug/L	0.170	4.00	<0.170						
1,2,3-Trichloropropane	11A0233			ug/L	0.190	1.00	<0.190						CIN
1,2,4-Trimethylbenzene	11A0233			ug/L	0.200	1.00	<0.200						
1,3,5-Trimethylbenzene	11A0233			ug/L	0.200	1.00	<0.200						
Vinyl chloride	11A0233			ug/L	0.100	1.00	<0.100						
Xylenes, total	11A0233			ug/L	0.130	3.00	<0.130						
Surrogate: Dibromoform	11A0233			ug/L				96		75-120			
Surrogate: Toluene-d8	11A0233			ug/L				97		80-120			
Surrogate: 4-Bromofluorobenzene	11A0233			ug/L				96		75-110			
Acetone	11A0336			ug/kg wet	N/A	112	<112						
Acrylonitrile	11A0336			ug/kg wet	N/A	112	<112						
Benzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Bromobenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Bromochloromethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
Bromodichloromethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
Bromoform	11A0336			ug/kg wet	N/A	22.5	<22.5						
Bromomethane	11A0336			ug/kg wet	N/A	44.9	<44.9						
2-Butanone (MEK)	11A0336			ug/kg wet	N/A	112	<112						
n-Butylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
sec-Butylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
tert-Butylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Carbon disulfide	11A0336			ug/kg wet	N/A	11.2	<11.2						

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Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup Result	% REC Limits	RPD Limit	RPD Limit	Q
Volatile Organic Compounds													
Carbon Tetrachloride	11A0336			ug/kg wet	N/A	11.2	<11.2						
Chlorobenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Chlorodibromomethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
Chloroethane	11A0336			ug/kg wet	N/A	44.9	<44.9						
Chloroform	11A0336			ug/kg wet	N/A	11.2	<11.2						
Chloromethane	11A0336			ug/kg wet	N/A	44.9	<44.9						
2-Chlorotoluene	11A0336			ug/kg wet	N/A	11.2	<11.2						
4-Chlorotoluene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2-Dibromo-3-chloropropane	11A0336			ug/kg wet	N/A	112	<112						
1,2-Dibromoethane (EDB)	11A0336			ug/kg wet	N/A	112	<112						
Dibromomethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2-Dichlorobenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,3-Dichlorobenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,4-Dichlorobenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Dichlorodifluoromethane	11A0336			ug/kg wet	N/A	33.7	<33.7						
1,1-Dichloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2-Dichloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,1-Dichloroethene	11A0336			ug/kg wet	N/A	11.2	<11.2						
cis-1,2-Dichloroethene	11A0336			ug/kg wet	N/A	11.2	<11.2						
trans-1,2-Dichloroethene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2-Dichloropropane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,3-Dichloropropane	11A0336			ug/kg wet	N/A	11.2	<11.2						
2,2-Dichloropropane	11A0336			ug/kg wet	N/A	44.9	<44.9						
1,1-Dichloropropene	11A0336			ug/kg wet	N/A	11.2	<11.2						
cis-1,3-Dichloropropene	11A0336			ug/kg wet	N/A	11.2	<11.2						
trans-1,3-Dichloropropene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Ethylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Hexachlorobutadiene	11A0336			ug/kg wet	N/A	56.1	<56.1						
Hexane	11A0336			ug/kg wet	N/A	56.1	<56.1						
Isopropylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
p-Isopropyltoluene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Methylene Chloride	11A0336			ug/kg wet	N/A	112	<112						
Methyl tert-Butyl Ether	11A0336			ug/kg wet	N/A	11.2	<11.2						
Naphthalene	11A0336			ug/kg wet	N/A	56.1	<56.1						
n-Propylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Styrene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,1,1,2-Tetrachloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,1,2,2-Tetrachloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
Tetrachloroethene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Toluene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2,3-Trichlorobenzene	11A0336			ug/kg wet	N/A	56.1	<56.1						
1,2,4-Trichlorobenzene	11A0336			ug/kg wet	N/A	56.1	<56.1						
1,1,1-Trichloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,1,2-Trichloroethane	11A0336			ug/kg wet	N/A	11.2	<11.2						
Trichloroethene	11A0336			ug/kg wet	N/A	11.2	<11.2						

HOWARD R. GREEN CO. - CEDAR RAPIDS <
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 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds													
Trichlorofluoromethane	11A0336			ug/kg wet	N/A	44.9	<44.9						
1,2,3-Trichloropropane	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,2,4-Trimethylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
1,3,5-Trimethylbenzene	11A0336			ug/kg wet	N/A	11.2	<11.2						
Vinyl chloride	11A0336			ug/kg wet	N/A	33.7	<33.7						
Xylenes, total	11A0336			ug/kg wet	N/A	33.7	<33.7						
<i>Surrogate: Dibromofluoromethane</i>	<i>11A0336</i>			ug/L				88		75-125			
<i>Surrogate: Toluene-d8</i>	<i>11A0336</i>			ug/L				100		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>11A0336</i>			ug/L				98		80-120			
PAH Compounds by SIM GCMS													
Acenaphthene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Acenaphthylene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Anthracene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Benzo (a) anthracene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Benzo (b) fluoranthene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Benzo (k) fluoranthene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Benzo (a) pyrene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Benzo (g,h,i) perylene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Chrysene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Dibenzo (a,h) anthracene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Fluoranthene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Fluorene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Indeno (1,2,3-cd) pyrene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
2-Methylnaphthalene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Naphthalene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Phenanthrene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
Pyrene	11A0220			mg/kg wet	N/A	0.0100	<0.0100						
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>11A0220</i>			mg/kg wet				73		45-110			
<i>Surrogate: Nitrobenzene-d5</i>	<i>11A0220</i>			mg/kg wet				74		40-120			
<i>Surrogate: Terphenyl-d14</i>	<i>11A0220</i>			mg/kg wet				105		25-150			
Acenaphthene	11A0262			ug/L	0.00870	0.100	<0.00870						
Acenaphthylene	11A0262			ug/L	0.00950	0.100	<0.00950						
Anthracene	11A0262			ug/L	0.0170	0.100	<0.0170						J
Benzo (a) anthracene	11A0262			ug/L	0.00920	0.100	0.0109						
Benzo (b) fluoranthene	11A0262			ug/L	0.00760	0.100	<0.00760						
Benzo (k) fluoranthene	11A0262			ug/L	0.00770	0.100	<0.00770						
Benzo (a) pyrene	11A0262			ug/L	0.0160	0.100	<0.0160						
Benzo (g,h,i) perylene	11A0262			ug/L	0.00810	0.100	<0.00810						
Chrysene	11A0262			ug/L	0.00700	0.100	<0.00700						
Dibenzo (a,h) anthracene	11A0262			ug/L	0.00810	0.100	<0.00810						
Fluoranthene	11A0262			ug/L	0.00850	0.100	<0.00850						
Fluorene	11A0262			ug/L	0.0100	0.100	<0.0100						
Indeno (1,2,3-cd) pyrene	11A0262			ug/L	0.0110	0.100	<0.0110						

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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD Limit	RPD Limit	Q
PAH Compounds by SIM GCMS													
2-Methylnaphthalene	11A0262			ug/L	0.0310	0.100	<0.0310						
Naphthalene	11A0262			ug/L	0.0290	0.100	<0.0290						
Phenanthrene	11A0262			ug/L	0.0140	0.100	<0.0140						
Pyrene	11A0262			ug/L	0.0180	0.100	<0.0180						
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>11A0262</i>			ug/L				56		30-105			
<i>Surrogate: Nitrobenzene-d5</i>	<i>11A0262</i>			ug/L				61		30-115			
<i>Surrogate: Terphenyl-d14</i>	<i>11A0262</i>			ug/L				80		20-150			
UST ANALYSIS PARAMETERS													
Diesel	11A0193			ug/L	N/A	300	<300						
Gasoline	11A0193			ug/L	N/A	300	<300						
Motor Oil	11A0193			ug/L	N/A	300	<300						
<i>Surrogate: Octacosane</i>	<i>11A0193</i>			ug/L				99		55-150			
Diesel	11A0219			mg/kg	N/A	10.0	<10.0						
Gasoline	11A0219			mg/kg	N/A	10.0	<10.0						
Motor Oil	11A0219			mg/kg	N/A	10.0	<10.0						
<i>Surrogate: Octacosane</i>	<i>11A0219</i>			mg/kg				99		50-150			

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LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: CUA0221-08													
% Solids	11A0272	85.7	%	N/A	0.100	85.6					0	10	
QC Source Sample: CUA0222-04													
% Solids	11A0272	79.2	%	N/A	0.100	79.5					0	10	
Total Metals by SW 846 Series Methods													
QC Source Sample: CUA0210-02													
Barium	11A0216	0.0795	mg/L	N/A	0.0100	0.0810					2	20	
Chromium	11A0216	0.00304	mg/L	N/A	0.0200	0.00337					10	20	
Silver	11A0216	<0.0200	mg/L	N/A	0.0200	<0.0200						20	

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Total Metals by SW 846 Series Methods													
Barium	11A0216		1.00	mg/L	N/A	0.0100	0.982	98		80-115			
Chromium	11A0216		1.00	mg/L	N/A	0.0200	0.975	97		85-115			
Silver	11A0216		1.00	mg/L	N/A	0.0200	0.963	96		80-110			
Arsenic	11A0240		0.0400	mg/L	N/A	0.00200	0.0382	95		80-120			
Cadmium	11A0240		0.0200	mg/L	N/A	0.00750	0.0204	102		80-120			
Lead	11A0240		0.0400	mg/L	N/A	0.00400	0.0408	102		85-120			
Selenium	11A0240		0.0800	mg/L	N/A	0.0100	0.0784	98		80-120			
Mercury	11A0282		0.0016	mg/L	N/A	0.000200	0.00165	99		80-120			
			7										
Volatile Organic Compounds													
Acetone	11A0233		20.0	ug/L	N/A	N/A	26.2	131		60-150		20	
Acrylonitrile	11A0233		20.0	ug/L	N/A	N/A	18.2	91		50-145		25	
Benzene	11A0233		20.0	ug/L	N/A	N/A	20.0	100		70-130		25	
Bromobenzene	11A0233		20.0	ug/L	N/A	N/A	17.7	88		75-130		20	CIN
Bromochloromethane	11A0233		20.0	ug/L	N/A	N/A	19.4	97		65-145		10	
Bromodichloromethane	11A0233		20.0	ug/L	N/A	N/A	18.7	93		60-130		15	
Bromoform	11A0233		20.0	ug/L	N/A	N/A	16.5	82		30-125		25	
Bromomethane	11A0233		20.0	ug/L	N/A	N/A	16.6	83		35-130		35	
2-Butanone (MEK)	11A0233		20.0	ug/L	N/A	N/A	20.7	104		55-140		25	
n-Butylbenzene	11A0233		20.0	ug/L	N/A	N/A	18.9	94		55-135		10	
sec-Butylbenzene	11A0233		20.0	ug/L	N/A	N/A	18.9	95		65-135		15	
tert-Butylbenzene	11A0233		20.0	ug/L	N/A	N/A	18.7	94		60-135		10	
Carbon disulfide	11A0233		20.0	ug/L	N/A	N/A	17.8	89		40-130		20	
Carbon Tetrachloride	11A0233		20.0	ug/L	N/A	N/A	19.9	100		55-130		25	
Chlorobenzene	11A0233		20.0	ug/L	N/A	N/A	17.6	88		75-125		15	CIN
Chlorodibromomethane	11A0233		20.0	ug/L	N/A	N/A	17.3	86		45-125		20	
Chloroethane	11A0233		20.0	ug/L	N/A	N/A	18.3	92		55-135		20	
Chloroform	11A0233		20.0	ug/L	N/A	N/A	19.7	99		70-125		15	
Chloromethane	11A0233		20.0	ug/L	N/A	N/A	18.2	91		30-125		25	
2-Chlorotoluene	11A0233		20.0	ug/L	N/A	N/A	18.8	94		75-135		15	CIN
4-Chlorotoluene	11A0233		20.0	ug/L	N/A	N/A	18.2	91		70-140		20	
1,2-Dibromo-3-chloropropane	11A0233		20.0	ug/L	N/A	N/A	16.4	82		35-130		25	
1,2-Dibromoethane (EDB)	11A0233		20.0	ug/L	N/A	N/A	18.4	92		70-135		25	
Dibromomethane	11A0233		20.0	ug/L	N/A	N/A	18.4	92		75-130		30	
1,2-Dichlorobenzene	11A0233		20.0	ug/L	N/A	N/A	18.1	91		65-135		10	
1,3-Dichlorobenzene	11A0233		20.0	ug/L	N/A	N/A	18.3	91		70-130		10	
1,4-Dichlorobenzene	11A0233		20.0	ug/L	N/A	N/A	18.6	93		60-140		10	
Dichlorodifluoromethane	11A0233		20.0	ug/L	N/A	N/A	21.7	109		35-130		25	
1,1-Dichloroethane	11A0233		20.0	ug/L	N/A	N/A	19.1	95		60-130		15	
1,2-Dichloroethane	11A0233		20.0	ug/L	N/A	N/A	19.0	95		65-140		15	
1,1-Dichloroethene	11A0233		20.0	ug/L	N/A	N/A	19.0	95		60-135		20	
cis-1,2-Dichloroethene	11A0233		20.0	ug/L	N/A	N/A	19.9	99		70-135		15	
trans-1,2-Dichloroethene	11A0233		20.0	ug/L	N/A	N/A	20.4	102		60-145		15	
1,2-Dichloropropane	11A0233		20.0	ug/L	N/A	N/A	18.4	92		65-130		15	
1,3-Dichloropropane	11A0233		20.0	ug/L	N/A	N/A	17.9	90		75-125		15	CIN
2,2-Dichloropropane	11A0233		20.0	ug/L	N/A	N/A	19.8	99		25-120		35	

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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD Limit	Q
Volatile Organic Compounds												
1,1-Dichloropropene	11A0233	20.0	ug/L	N/A	N/A	20.2	101			60-140	20	
cis-1,3-Dichloropropene	11A0233	20.0	ug/L	N/A	N/A	18.2	91			30-120	20	
trans-1,3-Dichloropropene	11A0233	20.0	ug/L	N/A	N/A	18.2	91			35-120	15	
Ethylbenzene	11A0233	20.0	ug/L	N/A	N/A	19.0	95			70-130	35	
Hexachlorobutadiene	11A0233	20.0	ug/L	N/A	N/A	18.7	94			60-135	15	
Hexane	11A0233	20.0	ug/L	N/A	N/A	19.4	97			40-135	35	
Isopropylbenzene	11A0233	20.0	ug/L	N/A	N/A	19.1	95			70-125	15	
p-Isopropyltoluene	11A0233	20.0	ug/L	N/A	N/A	18.3	91			60-140	10	
Methylene Chloride	11A0233	20.0	ug/L	N/A	N/A	19.0	95			55-145	20	
Methyl tert-Butyl Ether	11A0233	20.0	ug/L	N/A	N/A	19.1	96			50-135	30	
Naphthalene	11A0233	20.0	ug/L	N/A	N/A	16.6	83			40-135	35	
n-Propylbenzene	11A0233	20.0	ug/L	N/A	N/A	18.7	94			70-135	20	
Styrene	11A0233	20.0	ug/L	N/A	N/A	17.4	87			70-130	15	
1,1,1,2-Tetrachloroethane	11A0233	20.0	ug/L	N/A	N/A	18.0	90			65-120	15	
1,1,2,2-Tetrachloroethane	11A0233	20.0	ug/L	N/A	N/A	16.9	85			65-130	20	CIN
Tetrachloroethene	11A0233	20.0	ug/L	N/A	N/A	20.1	101			70-135	15	
Toluene	11A0233	20.0	ug/L	N/A	N/A	19.3	97			70-135	30	
1,2,3-Trichlorobenzene	11A0233	20.0	ug/L	N/A	N/A	17.5	88			55-130	15	
1,2,4-Trichlorobenzene	11A0233	20.0	ug/L	N/A	N/A	17.9	89			40-135	15	
1,1,1-Trichloroethane	11A0233	20.0	ug/L	N/A	N/A	20.1	101			60-125	15	
1,1,2-Trichloroethane	11A0233	20.0	ug/L	N/A	N/A	17.7	88			75-125	15	CIN
Trichloroethene	11A0233	20.0	ug/L	N/A	N/A	19.8	99			70-130	20	
Trichlorofluoromethane	11A0233	20.0	ug/L	N/A	N/A	18.5	93			55-145	20	
1,2,3-Trichloropropane	11A0233	20.0	ug/L	N/A	N/A	16.8	84			60-150	20	CIN
1,2,4-Trimethylbenzene	11A0233	20.0	ug/L	N/A	N/A	18.6	93			70-140	15	
1,3,5-Trimethylbenzene	11A0233	20.0	ug/L	N/A	N/A	18.8	94			70-140	15	
Vinyl chloride	11A0233	20.0	ug/L	N/A	N/A	20.1	101			45-135	20	
Xylenes, total	11A0233	60.0	ug/L	N/A	N/A	56.2	94			70-130	35	
Surrogate: Dibromoform	11A0233		ug/L				95			75-120		
Surrogate: Toluene-d8	11A0233		ug/L				97			80-120		
Surrogate: 4-Bromofluorobenzene	11A0233		ug/L				99			80-120		
Acetone	11A0336	20.0	ug/L	N/A	N/A	20.9	105			65-150		
Acrylonitrile	11A0336	20.0	ug/L	N/A	N/A	16.5	82			45-140		
Benzene	11A0336	20.0	ug/L	N/A	N/A	19.9	100			55-135		
Bromobenzene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			65-125		
Bromochloromethane	11A0336	20.0	ug/L	N/A	N/A	16.8	84			65-130		
Bromodichloromethane	11A0336	20.0	ug/L	N/A	N/A	18.2	91			65-130		
Bromoform	11A0336	20.0	ug/L	N/A	N/A	16.3	82			50-135		
Bromomethane	11A0336	20.0	ug/L	N/A	N/A	16.9	84			45-135		
2-Butanone (MEK)	11A0336	20.0	ug/L	N/A	N/A	20.2	101			50-145		
n-Butylbenzene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			55-130		
sec-Butylbenzene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			60-125		
tert-Butylbenzene	11A0336	20.0	ug/L	N/A	N/A	19.4	97			55-125		
Carbon disulfide	11A0336	20.0	ug/L	N/A	N/A	15.5	77			40-135		

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds													
Carbon Tetrachloride	11A0336	20.0	ug/L	N/A	N/A	18.3	92			55-130			
Chlorobenzene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			60-120			
Chlorodibromomethane	11A0336	20.0	ug/L	N/A	N/A	18.0	90			55-130			
Chloroethane	11A0336	20.0	ug/L	N/A	N/A	17.2	86			50-145			
Chloroform	11A0336	20.0	ug/L	N/A	N/A	15.9	79			65-130			
Chloromethane	11A0336	20.0	ug/L	N/A	N/A	17.2	86			40-135			
2-Chlorotoluene	11A0336	20.0	ug/L	N/A	N/A	19.5	97			60-125			
4-Chlorotoluene	11A0336	20.0	ug/L	N/A	N/A	18.8	94			60-125			
1,2-Dibromo-3-chloropropane	11A0336	20.0	ug/L	N/A	N/A	16.9	85			50-140			
1,2-Dibromoethane (EDB)	11A0336	20.0	ug/L	N/A	N/A	19.3	96			55-140			
Dibromomethane	11A0336	20.0	ug/L	N/A	N/A	19.0	95			65-135			
1,2-Dichlorobenzene	11A0336	20.0	ug/L	N/A	N/A	19.3	97			65-120			
1,3-Dichlorobenzene	11A0336	20.0	ug/L	N/A	N/A	19.2	96			60-125			
1,4-Dichlorobenzene	11A0336	20.0	ug/L	N/A	N/A	19.7	98			60-125			
Dichlorodifluoromethane	11A0336	20.0	ug/L	N/A	N/A	15.8	79			40-135			
1,1-Dichloroethane	11A0336	20.0	ug/L	N/A	N/A	16.9	85			55-135			
1,2-Dichloroethane	11A0336	20.0	ug/L	N/A	N/A	17.0	85			60-140			
1,1-Dichloroethene	11A0336	20.0	ug/L	N/A	N/A	16.4	82			50-145			
cis-1,2-Dichloroethene	11A0336	20.0	ug/L	N/A	N/A	17.1	86			60-135			
trans-1,2-Dichloroethene	11A0336	20.0	ug/L	N/A	N/A	16.8	84			55-135			
1,2-Dichloropropane	11A0336	20.0	ug/L	N/A	N/A	19.6	98			55-130			
1,3-Dichloropropane	11A0336	20.0	ug/L	N/A	N/A	19.4	97			55-140			
2,2-Dichloropropane	11A0336	20.0	ug/L	N/A	N/A	16.5	82			40-135			
1,1-Dichloropropene	11A0336	20.0	ug/L	N/A	N/A	17.2	86			55-130			
cis-1,3-Dichloropropene	11A0336	20.0	ug/L	N/A	N/A	19.2	96			50-115			
trans-1,3-Dichloropropene	11A0336	20.0	ug/L	N/A	N/A	18.4	92			55-130			
Ethylbenzene	11A0336	20.0	ug/L	N/A	N/A	19.5	98			60-125			
Hexachlorobutadiene	11A0336	20.0	ug/L	N/A	N/A	18.0	90			40-135			
Hexane	11A0336	20.0	ug/L	N/A	N/A	16.6	83			45-140			
Isopropylbenzene	11A0336	20.0	ug/L	N/A	N/A	19.4	97			60-125			
p-Isopropyltoluene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			60-120			
Methylene Chloride	11A0336	20.0	ug/L	N/A	N/A	19.6	98			55-145			
Methyl tert-Butyl Ether	11A0336	20.0	ug/L	N/A	N/A	17.4	87			55-130			
Naphthalene	11A0336	20.0	ug/L	N/A	N/A	18.5	92			50-130			
n-Propylbenzene	11A0336	20.0	ug/L	N/A	N/A	18.8	94			50-125			
Styrene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			60-125			
1,1,1,2-Tetrachloroethane	11A0336	20.0	ug/L	N/A	N/A	18.5	92			65-125			
1,1,2,2-Tetrachloroethane	11A0336	20.0	ug/L	N/A	N/A	19.8	99			60-125			
Tetrachloroethene	11A0336	20.0	ug/L	N/A	N/A	19.9	100			55-125			
Toluene	11A0336	20.0	ug/L	N/A	N/A	19.7	99			60-130			
1,2,3-Trichlorobenzene	11A0336	20.0	ug/L	N/A	N/A	18.6	93			50-130			
1,2,4-Trichlorobenzene	11A0336	20.0	ug/L	N/A	N/A	19.0	95			45-135			
1,1,1-Trichloroethane	11A0336	20.0	ug/L	N/A	N/A	18.8	94			60-125			
1,1,2-Trichloroethane	11A0336	20.0	ug/L	N/A	N/A	19.9	99			55-135			
Trichloroethene	11A0336	20.0	ug/L	N/A	N/A	19.8	99			60-130			

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 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD Limit	RPD Limit	Q
Volatile Organic Compounds													
Trichlorofluoromethane	11A0336		20.0	ug/L	N/A	N/A	16.5	83		50-145			
1,2,3-Trichloropropane	11A0336		20.0	ug/L	N/A	N/A	20.0	100		50-145			
1,2,4-Trimethylbenzene	11A0336		20.0	ug/L	N/A	N/A	19.4	97		55-125			
1,3,5-Trimethylbenzene	11A0336		20.0	ug/L	N/A	N/A	19.1	96		50-130			
Vinyl chloride	11A0336		20.0	ug/L	N/A	N/A	17.0	85		45-140			
Xylenes, total	11A0336		60.0	ug/L	N/A	N/A	58.5	97		50-130			
<i>Surrogate: Dibromofluoromethane</i>	<i>11A0336</i>			ug/L				91		75-125			
<i>Surrogate: Toluene-d8</i>	<i>11A0336</i>			ug/L				99		80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>11A0336</i>			ug/L				101		80-120			
PAH Compounds by SIM GCMS													
Acenaphthene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0419		63		35-120			
Acenaphthylene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0434		65		50-105			
Anthracene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0412		62		30-125			
Benzo (a) anthracene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0496		74		55-120			
Benzo (b) fluoranthene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0564		85		50-145			
Benzo (k) fluoranthene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0492		74		50-125			
Benzo (a) pyrene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0513		77		50-130			
Benzo (g,h,i) perylene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0547		82		40-110			
Chrysene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0521		78		40-135			
Dibenzo (a,h) anthracene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0590		89		40-135			
Fluoranthene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0501		75		50-125			
Fluorene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0455		68		50-120			
Indeno (1,2,3-cd) pyrene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0568		85		55-130			
2-Methylnaphthalene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0417		63		30-125			
Naphthalene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0397		60		30-125			
Phenanthrene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0427		64		40-135			
Pyrene	11A0220	0.0667	mg/kg wet	N/A	0.0100	0.0516		77		35-130			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>11A0220</i>		mg/kg wet					71		40-105			
<i>Surrogate: Nitrobenzene-d5</i>	<i>11A0220</i>		mg/kg wet					73		40-115			
<i>Surrogate: Terphenyl-d14</i>	<i>11A0220</i>		mg/kg wet					100		45-140			
Acenaphthene	11A0262	2.00	ug/L	0.00870	0.100	1.16	1.16	58	58	30-105	0	35	
Acenaphthylene	11A0262	2.00	ug/L	0.00950	0.100	1.21	1.21	61	60	25-110	0	35	
Anthracene	11A0262	2.00	ug/L	0.0170	0.100	1.17	1.22	58	61	25-120	4	35	
Benzo (a) anthracene	11A0262	2.00	ug/L	0.00920	0.100	1.34	1.35	67	68	45-115	1	35	
Benzo (b) fluoranthene	11A0262	2.00	ug/L	0.00760	0.100	1.51	1.56	75	78	40-135	3	35	
Benzo (k) fluoranthene	11A0262	2.00	ug/L	0.00770	0.100	1.30	1.27	65	63	35-120	3	35	
Benzo (a) pyrene	11A0262	2.00	ug/L	0.0160	0.100	1.42	1.43	71	72	35-130	1	35	
Benzo (g,h,i) perylene	11A0262	2.00	ug/L	0.00810	0.100	1.54	1.57	77	79	30-125	2	35	
Chrysene	11A0262	2.00	ug/L	0.00700	0.100	1.40	1.41	70	70	30-120	1	35	
Dibenzo (a,h) anthracene	11A0262	2.00	ug/L	0.00810	0.100	1.69	1.74	85	87	30-125	3	35	
Fluoranthene	11A0262	2.00	ug/L	0.00850	0.100	1.26	1.31	63	66	30-125	5	35	
Fluorene	11A0262	2.00	ug/L	0.0100	0.100	1.26	1.27	63	64	35-110	1	35	
Indeno (1,2,3-cd) pyrene	11A0262	2.00	ug/L	0.0110	0.100	1.59	1.62	80	81	35-130	2	35	

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Received: 01/06/11
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LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
PAH Compounds by SIM GCMS														
2-Methylnaphthalene	11A0262		2.00	ug/L	0.0310	0.100	1.18	1.14	59	57	30-110	3	30	
Naphthalene	11A0262		2.00	ug/L	0.0290	0.100	1.13	1.11	56	56	30-110	1	25	
Phenanthrene	11A0262		2.00	ug/L	0.0140	0.100	1.13	1.22	57	61	30-125	7	35	
Pyrene	11A0262		2.00	ug/L	0.0180	0.100	1.34	1.39	67	69	30-125	3	35	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>11A0262</i>			ug/L					63	61	25-110			
<i>Surrogate: Nitrobenzene-d5</i>	<i>11A0262</i>			ug/L					66	65	30-115			
<i>Surrogate: Terphenyl-d14</i>	<i>11A0262</i>			ug/L					88	83	35-130			
UST ANALYSIS PARAMETERS														
Motor Oil	11A0193		2000	ug/L	N/A	300	1250	1200	63	60	35-115	4	35	
<i>Surrogate: Octacosane</i>	<i>11A0193</i>			ug/L					134	129	45-140			
Motor Oil	11A0219		66.7	mg/kg	N/A	10.0	56.8		85		70-130			
<i>Surrogate: Octacosane</i>	<i>11A0219</i>			mg/kg					190		65-150			ZX

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MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Total Metals by SW 846 Series Methods													
QC Source Sample: CUA0169-01													
Barium	11A0216	<0.0100	1.00	mg/L	N/A	0.0100	0.963	0.937	96	94	75-110	3	20
Chromium	11A0216	0.00737	1.00	mg/L	N/A	0.0200	0.944	0.922	94	91	75-115	2	20
Silver	11A0216	<0.0200	1.00	mg/L	N/A	0.0200	0.935	0.909	94	91	75-110	3	15
QC Source Sample: CUA0200-02													
Barium	11A0216	0.0338	1.00	mg/L	N/A	0.0100	0.979		95		75-110		
Chromium	11A0216	0.00473	1.00	mg/L	N/A	0.0200	0.924		92		75-115		
Silver	11A0216	<0.0200	1.00	mg/L	N/A	0.0200	0.919		92		75-110		
QC Source Sample: CUA0126-03													
Arsenic	11A0240	<0.00200	0.0400	mg/L	N/A	0.00200	0.0378	0.0362	95	91	75-125	4	20
Cadmium	11A0240	<0.00750	0.0200	mg/L	N/A	0.00750	0.0179	0.0170	89	85	75-125	5	20
Lead	11A0240	<0.00400	0.0400	mg/L	N/A	0.00400	0.0396	0.0424	99	106	75-125	7	20
Selenium	11A0240	<0.0100	0.0800	mg/L	N/A	0.0100	0.0764	0.0805	95	101	75-125	5	20
QC Source Sample: CUA0292-02													
Mercury	11A0282	<0.000200	0.0016 7	mg/L	N/A	0.000200	0.00178	0.00182	107	109	70-130	2	20
Volatile Organic Compounds													
QC Source Sample: CUA0226-01													
Acetone	11A0233	3.62	20.0	ug/L	N/A	N/A	21.0	20.7	87	85	45-150	2	35
Acrylonitrile	11A0233	0.360	20.0	ug/L	N/A	N/A	18.8	20.8	92	102	45-145	10	35
Benzene	11A0233	0.0300	20.0	ug/L	N/A	N/A	21.2	22.0	106	110	50-130	3	20
Bromobenzene	11A0233	0.110	20.0	ug/L	N/A	N/A	19.1	20.2	95	100	60-135	6	15
Bromochloromethane	11A0233	0.0400	20.0	ug/L	N/A	N/A	20.6	23.2	103	116	55-145	11	25
Bromodichloromethane	11A0233	0.110	20.0	ug/L	N/A	N/A	19.9	21.5	99	107	50-130	8	15
Bromoform	11A0233	0.100	20.0	ug/L	N/A	N/A	18.7	20.0	93	100	30-125	7	25
Bromomethane	11A0233	1.68	20.0	ug/L	N/A	N/A	29.6	26.8	140	125	30-130	10	35
2-Butanone (MEK)	11A0233	0.530	20.0	ug/L	N/A	N/A	21.1	20.3	103	99	45-140	4	35
n-Butylbenzene	11A0233	0.310	20.0	ug/L	N/A	N/A	20.7	22.1	102	109	40-135	6	20
sec-Butylbenzene	11A0233	0.200	20.0	ug/L	N/A	N/A	20.6	22.3	102	110	40-135	8	20
tert-Butylbenzene	11A0233	0.190	20.0	ug/L	N/A	N/A	20.6	22.1	102	110	40-135	7	20
Carbon disulfide	11A0233	0.230	20.0	ug/L	N/A	N/A	20.1	21.7	99	107	30-130	8	30
Carbon Tetrachloride	11A0233	<0.24	20.0	ug/L	N/A	N/A	21.7	22.6	109	113	35-130	4	20
Chlorobenzene	11A0233	0.0600	20.0	ug/L	N/A	N/A	19.0	20.2	95	101	60-130	6	15
Chlorodibromomethane	11A0233	0.130	20.0	ug/L	N/A	N/A	18.4	20.7	92	103	35-130	11	20
Chloroethane	11A0233	<0.15	20.0	ug/L	N/A	N/A	ND	<N/A			40-135		20
Chloroform	11A0233	0.200	20.0	ug/L	N/A	N/A	20.3	21.6	100	107	55-125	7	15
Chloromethane	11A0233	<0.31	20.0	ug/L	N/A	N/A	88.6	106	443	531	25-125	18	25
2-Chlorotoluene	11A0233	0.120	20.0	ug/L	N/A	N/A	20.0	21.6	99	108	55-140	8	20
4-Chlorotoluene	11A0233	0.120	20.0	ug/L	N/A	N/A	19.7	21.0	98	105	50-140	6	20
1,2-Dibromo-3-chloropropane	11A0233	0.540	20.0	ug/L	N/A	N/A	19.3	21.7	94	106	35-130	11	30
1,2-Dibromoethane (EDB)	11A0233	0.0200	20.0	ug/L	N/A	N/A	20.2	21.6	101	108	55-140	7	20
Dibromomethane	11A0233	0.0400	20.0	ug/L	N/A	N/A	20.0	21.1	100	105	60-135	5	15
1,2-Dichlorobenzene	11A0233	0.260	20.0	ug/L	N/A	N/A	19.6	21.9	96	108	55-140	11	20
1,3-Dichlorobenzene	11A0233	0.210	20.0	ug/L	N/A	N/A	20.6	22.4	102	111	55-135	8	15
1,4-Dichlorobenzene	11A0233	0.200	20.0	ug/L	N/A	N/A	20.2	21.6	100	107	55-140	7	15
Dichlorodifluoromethane	11A0233	0.0800	20.0	ug/L	N/A	N/A	23.4	24.1	117	120	15-130	3	25
1,1-Dichloroethane	11A0233	<0.21	20.0	ug/L	N/A	N/A	20.5	21.8	102	109	50-130	6	25
1,2-Dichloroethane	11A0233	<0.18	20.0	ug/L	N/A	N/A	20.0	21.5	100	108	55-140	7	15

TestAmerica Cedar Falls

Angela Muehling
Project Coordinator

HOWARD R. GREEN CO. - CEDAR RAPIDS <
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 Robin Husman

Work Order: CUA0222
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Received: 01/06/11
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MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds													
QC Source Sample: CUA0226-01													
1,1-Dichloroethene	11A0233	0.0900	20.0	ug/L	N/A	N/A	21.0	21.5	105	107	35-135	2	30
cis-1,2-Dichloroethene	11A0233	0.0200	20.0	ug/L	N/A	N/A	20.4	21.8	102	109	45-135	6	20
trans-1,2-Dichloroethene	11A0233	0.110	20.0	ug/L	N/A	N/A	21.5	23.5	107	117	45-145	9	35
1,2-Dichloropropane	11A0233	<0.11	20.0	ug/L	N/A	N/A	19.8	20.8	99	104	55-130	5	15
1,3-Dichloropropane	11A0233	0.0900	20.0	ug/L	N/A	N/A	19.4	20.8	96	104	60-135	7	15
2,2-Dichloropropane	11A0233	<0.18	20.0	ug/L	N/A	N/A	21.6	23.2	108	116	20-120	7	35
1,1-Dichloropropene	11A0233	<0.15	20.0	ug/L	N/A	N/A	22.1	23.2	110	116	40-140	5	20
cis-1,3-Dichloropropene	11A0233	<0.15	20.0	ug/L	N/A	N/A	19.4	20.6	97	103	25-120	6	20
trans-1,3-Dichloropropene	11A0233	0.0200	20.0	ug/L	N/A	N/A	20.1	20.9	101	105	25-120	4	20
Ethylbenzene	11A0233	0.160	20.0	ug/L	N/A	N/A	21.1	21.9	105	109	45-135	3	20
Hexachlorobutadiene	11A0233	0.900	20.0	ug/L	N/A	N/A	23.9	26.8	115	129	40-135	11	30
Hexane	11A0233	0.100	20.0	ug/L	N/A	N/A	21.3	22.5	106	112	25-135	5	35
Isopropylbenzene	11A0233	0.0800	20.0	ug/L	N/A	N/A	20.6	22.1	103	110	45-125	7	15
p-Isopropyltoluene	11A0233	0.180	20.0	ug/L	N/A	N/A	20.6	21.6	102	107	40-140	5	20
Methylene Chloride	11A0233	0.0900	20.0	ug/L	N/A	N/A	20.2	21.2	101	105	45-145	4	30
Methyl tert-Butyl Ether	11A0233	0.0700	20.0	ug/L	N/A	N/A	20.2	22.0	101	110	40-135	8	25
Naphthalene	11A0233	2.03	20.0	ug/L	N/A	N/A	20.4	23.1	92	105	40-135	12	20
n-Propylbenzene	11A0233	0.130	20.0	ug/L	N/A	N/A	20.7	22.0	103	109	45-140	6	20
Styrene	11A0233	0.0600	20.0	ug/L	N/A	N/A	19.5	20.7	97	103	40-135	6	20
1,1,1,2-Tetrachloroethane	11A0233	0.0200	20.0	ug/L	N/A	N/A	19.7	22.0	98	110	50-130	11	20
1,1,2,2-Tetrachloroethane	11A0233	0.210	20.0	ug/L	N/A	N/A	19.5	21.3	96	106	55-140	9	20
Tetrachloroethene	11A0233	0.150	20.0	ug/L	N/A	N/A	22.5	23.9	112	119	40-135	6	20
Toluene	11A0233	0.0700	20.0	ug/L	N/A	N/A	20.5	22.0	102	110	45-135	7	20
1,2,3-Trichlorobenzene	11A0233	1.74	20.0	ug/L	N/A	N/A	20.7	22.5	95	104	50-140	9	25
1,2,4-Trichlorobenzene	11A0233	0.960	20.0	ug/L	N/A	N/A	20.4	22.5	97	108	40-135	9	25
1,1,1-Trichloroethane	11A0233	0.0400	20.0	ug/L	N/A	N/A	22.0	23.1	110	115	40-125	5	20
1,1,2-Trichloroethane	11A0233	0.0800	20.0	ug/L	N/A	N/A	18.6	20.6	92	102	60-130	10	15
Trichloroethene	11A0233	<0.19	20.0	ug/L	N/A	N/A	20.8	22.6	104	113	50-130	8	20
Trichlorofluoromethane	11A0233	0.0100	20.0	ug/L	N/A	N/A	20.1	21.4	100	107	40-145	6	25
1,2,3-Trichloropropene	11A0233	0.150	20.0	ug/L	N/A	N/A	18.9	20.4	94	101	55-150	8	20
1,2,4-Trimethylbenzene	11A0233	0.150	20.0	ug/L	N/A	N/A	20.2	21.7	100	108	45-140	7	20
1,3,5-Trimethylbenzene	11A0233	0.130	20.0	ug/L	N/A	N/A	20.6	21.6	102	108	45-140	5	20
Vinyl chloride	11A0233	0.160	20.0	ug/L	N/A	N/A	21.3	23.2	106	115	30-135	8	20
Xylenes, total	11A0233	<0.13	60.0	ug/L	N/A	N/A	61.2	64.7	102	108	40-135	6	20
Surrogate: Dibromofluoromethane	11A0233			ug/L					99	104	75-120		
Surrogate: Toluene-d8	11A0233			ug/L					98	101	80-120		
Surrogate: 4-Bromofluorobenzene	11A0233			ug/L					99	102	80-120		
QC Source Sample: CUA0287-06													
Acetone	11A0336	3.01	20.0	ug/L	N/A	N/A	15.0	17.8	60	75	55-150	17	40
Acrylonitrile	11A0336	0.0599	20.0	ug/L	N/A	N/A	13.6	15.6	68	78	35-140	14	40
Benzene	11A0336	0.190	20.0	ug/L	N/A	N/A	17.8	18.3	88	90	40-135	2	40
Bromobenzene	11A0336	0.0999	20.0	ug/L	N/A	N/A	15.8	15.8	78	79	30-125	0	40
Bromoform	11A0336	<5.00	20.0	ug/L	N/A	N/A	16.5	16.8	83	84	55-130	2	35
Bromochloromethane	11A0336	0.0399	20.0	ug/L	N/A	N/A	15.2	16.4	76	82	50-130	7	35
Bromodichloromethane	11A0336	0.0300	20.0	ug/L	N/A	N/A	12.8	14.4	64	72	35-135	12	40

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup % REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds													
QC Source Sample: CUA0287-06													
Bromomethane	11A0336	<20.0	20.0	ug/L	N/A	N/A	14.9	14.9	75	74	40-135	0	35
2-Butanone (MEK)	11A0336	0.140	20.0	ug/L	N/A	N/A	15.4	15.8	76	78	40-145	3	40
n-Butylbenzene	11A0336	0.479	20.0	ug/L	N/A	N/A	12.7	12.6	61	61	20-130	1	40
sec-Butylbenzene	11A0336	0.150	20.0	ug/L	N/A	N/A	13.4	14.1	66	70	25-125	5	40
tert-Butylbenzene	11A0336	0.0899	20.0	ug/L	N/A	N/A	14.3	15.1	71	75	25-125	6	40
Carbon disulfide	11A0336	0.170	20.0	ug/L	N/A	N/A	11.7	13.0	57	64	35-135	11	40
Carbon Tetrachloride	11A0336	0.270	20.0	ug/L	N/A	N/A	14.6	16.0	72	79	45-130	9	35
Chlorobenzene	11A0336	0.0499	20.0	ug/L	N/A	N/A	16.0	16.3	80	81	35-120	1	35
Chlorodibromomethane	11A0336	0.0599	20.0	ug/L	N/A	N/A	14.6	16.1	73	80	45-130	10	40
Chloroethane	11A0336	<20.0	20.0	ug/L	N/A	N/A	14.5	14.7	72	73	45-145	1	35
Chloroform	11A0336	0.220	20.0	ug/L	N/A	N/A	14.5	15.3	72	75	55-130	5	35
Chloromethane	11A0336	<20.0	20.0	ug/L	N/A	N/A	14.6	16.2	73	81	40-135	10	40
2-Chlorotoluene	11A0336	0.0899	20.0	ug/L	N/A	N/A	14.1	15.5	70	77	25-125	9	40
4-Chlorotoluene	11A0336	0.0699	20.0	ug/L	N/A	N/A	14.1	14.2	70	71	25-125	1	40
1,2-Dibromo-3-chloropropane	11A0336	0.0999	20.0	ug/L	N/A	N/A	13.3	13.4	66	67	35-140	1	40
1,2-Dibromoethane (EDB)	11A0336	<50.0	20.0	ug/L	N/A	N/A	16.6	17.7	83	89	45-140	6	35
Dibromomethane	11A0336	0.0300	20.0	ug/L	N/A	N/A	17.7	18.1	88	90	50-135	2	35
1,2-Dichlorobenzene	11A0336	0.170	20.0	ug/L	N/A	N/A	14.0	14.7	69	73	25-120	5	40
1,3-Dichlorobenzene	11A0336	0.160	20.0	ug/L	N/A	N/A	13.1	13.8	65	68	25-125	5	40
1,4-Dichlorobenzene	11A0336	0.210	20.0	ug/L	N/A	N/A	13.2	14.4	65	71	20-125	9	40
Dichlorodifluoromethane	11A0336	0.0200	20.0	ug/L	N/A	N/A	12.5	13.1	62	65	35-135	5	35
1,1-Dichloroethane	11A0336	<5.00	20.0	ug/L	N/A	N/A	15.1	15.6	76	78	50-135	3	35
1,2-Dichloroethane	11A0336	<5.00	20.0	ug/L	N/A	N/A	15.4	16.1	77	81	50-140	5	40
1,1-Dichloroethene	11A0336	<5.00	20.0	ug/L	N/A	N/A	14.4	14.7	72	74	45-145	2	35
cis-1,2-Dichloroethene	11A0336	<5.00	20.0	ug/L	N/A	N/A	15.5	15.7	77	78	50-135	1	35
trans-1,2-Dichloroethene	11A0336	<5.00	20.0	ug/L	N/A	N/A	14.4	15.2	72	76	45-135	5	40
1,2-Dichloropropane	11A0336	0.0200	20.0	ug/L	N/A	N/A	17.8	18.4	89	92	50-130	3	35
1,3-Dichloropropane	11A0336	0.0200	20.0	ug/L	N/A	N/A	17.4	18.9	87	94	45-140	8	40
2,2-Dichloropropane	11A0336	<20.0	20.0	ug/L	N/A	N/A	13.9	14.3	70	72	40-135	3	35
1,1-Dichloropropene	11A0336	<5.00	20.0	ug/L	N/A	N/A	13.7	14.2	68	71	40-130	3	35
cis-1,3-Dichloropropene	11A0336	<5.00	20.0	ug/L	N/A	N/A	17.0	17.7	85	89	35-115	4	40
trans-1,3-Dichloropropene	11A0336	0.0200	20.0	ug/L	N/A	N/A	16.4	17.3	82	86	35-130	5	40
Ethylbenzene	11A0336	0.459	20.0	ug/L	N/A	N/A	16.2	16.7	79	82	30-125	3	40
Hexachlorobutadiene	11A0336	<25.0	20.0	ug/L	N/A	N/A	9.84	10.3	49	51	10-135	4	40
Hexane	11A0336	0.409	20.0	ug/L	N/A	N/A	11.2	10.9	54	53	20-140	3	40
Isopropylbenzene	11A0336	0.110	20.0	ug/L	N/A	N/A	15.2	15.7	76	78	25-125	3	40
p-Isopropyltoluene	11A0336	0.140	20.0	ug/L	N/A	N/A	13.1	13.4	65	66	20-120	2	40
Methylene Chloride	11A0336	95.1	20.0	ug/L	N/A	N/A	66.9	67.0	-141	-118	35-145	0	35
Methyl tert-Butyl Ether	11A0336	0.0999	20.0	ug/L	N/A	N/A	16.6	17.3	83	86	55-130	4	40
Naphthalene	11A0336	1.11	20.0	ug/L	N/A	N/A	14.2	14.3	65	66	15-130	1	40
n-Propylbenzene	11A0336	0.330	20.0	ug/L	N/A	N/A	14.4	14.8	70	73	20-125	3	40
Styrene	11A0336	0.0899	20.0	ug/L	N/A	N/A	15.7	16.3	78	81	20-125	4	40
1,1,1,2-Tetrachloroethane	11A0336	<5.00	20.0	ug/L	N/A	N/A	16.2	17.2	81	86	45-120	6	35
1,1,2,2-Tetrachloroethane	11A0336	0.0799	20.0	ug/L	N/A	N/A	17.2	18.2	86	90	40-125	5	40
Tetrachloroethene	11A0336	0.170	20.0	ug/L	N/A	N/A	15.3	15.2	76	75	30-125	1	40

HOWARD R. GREEN CO. - CEDAR RAPIDS <
 8710 Earhart Lane SW
 Cedar Rapids, IA 52404
 Robin Husman

Work Order: CUA0222
 Project: Clinton Brownfields - Clinton, IA
 Project Number: 725560J09

Received: 01/06/11
 Reported: 01/17/11 14:21

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds													
QC Source Sample: CUA0287-06													
Toluene	11A0336	0.829	20.0	ug/L	N/A	N/A	17.5	17.9	83	85	35-130	2	40
1,2,3-Trichlorobenzene	11A0336	0.369	20.0	ug/L	N/A	N/A	12.0	11.1	58	54	10-130	8	40
1,2,4-Trichlorobenzene	11A0336	0.360	20.0	ug/L	N/A	N/A	10.9	10.7	53	52	15-135	2	40
1,1,1-Trichloroethane	11A0336	<5.00	20.0	ug/L	N/A	N/A	16.2	17.0	81	85	45-125	5	35
1,1,2-Trichloroethane	11A0336	0.0300	20.0	ug/L	N/A	N/A	18.0	18.8	90	94	45-135	4	40
Trichloroethylene	11A0336	<5.00	20.0	ug/L	N/A	N/A	15.6	16.4	78	82	40-130	5	35
Trichlorofluoromethane	11A0336	0.00999	20.0	ug/L	N/A	N/A	13.6	13.6	68	68	45-145	0	35
1,2,3-Trichloropropane	11A0336	0.0799	20.0	ug/L	N/A	N/A	16.6	17.9	83	89	50-145	8	40
1,2,4-Trimethylbenzene	11A0336	2.29	20.0	ug/L	N/A	N/A	16.6	16.6	72	72	20-125	0	40
1,3,5-Trimethylbenzene	11A0336	0.569	20.0	ug/L	N/A	N/A	14.8	15.2	71	73	20-130	2	35
Vinyl chloride	11A0336	<15.0	20.0	ug/L	N/A	N/A	14.3	15.6	71	78	40-140	9	40
Xylenes, total	11A0336	3.23	60.0	ug/L	N/A	N/A	50.6	52.2	79	82	30-130	3	40
Surrogate: Dibromofluoromethane	11A0336			ug/L					92	89	75-125		
Surrogate: Toluene-d8	11A0336			ug/L					100	99	80-120		
Surrogate: 4-Bromofluorobenzene	11A0336			ug/L					102	100	80-120		
PAH Compounds by SIM GCMS													
QC Source Sample: CUA0221-01													
Acenaphthene	11A0220	0.0188	0.0764	mg/kg dry	N/A	0.344	0.0676	0.0702	64	68	25-120	4	40
Acenaphthylene	11A0220	0.00645	0.0764	mg/kg dry	N/A	0.344	0.0614	0.0630	72	75	25-120	3	40
Anthracene	11A0220	0.0247	0.0764	mg/kg dry	N/A	0.344	0.0877	0.0851	82	80	25-120	3	40
Benzo (a) anthracene	11A0220	0.0465	0.0764	mg/kg dry	N/A	0.344	0.130	0.144	109	129	30-125	10	40
Benzo (b) fluoranthene	11A0220	0.0917	0.0764	mg/kg dry	N/A	0.344	0.181	0.266	117	231	35-130	38	40
Benzo (k) fluoranthene	11A0220	0.0239	0.0764	mg/kg dry	N/A	0.344	0.104	0.0845	105	81	25-120	21	40
Benzo (a) pyrene	11A0220	0.0620	0.0764	mg/kg dry	N/A	0.344	0.158	0.195	126	176	35-125	21	40
Benzo (g,h,i) perylene	11A0220	0.0604	0.0764	mg/kg dry	N/A	0.344	0.164	0.193	136	176	20-115	16	40
Chrysene	11A0220	0.0662	0.0764	mg/kg dry	N/A	0.344	0.157	0.173	119	142	25-120	10	40
Dibenzo (a,h) anthracene	11A0220	0.0140	0.0764	mg/kg dry	N/A	0.344	0.0866	0.0899	95	101	30-125	4	40
Fluoranthene	11A0220	0.0696	0.0764	mg/kg dry	N/A	0.344	0.142	0.169	95	132	35-130	17	40
Fluorene	11A0220	0.00780	0.0764	mg/kg dry	N/A	0.344	0.0655	0.0680	76	80	40-115	4	40
Indeno (1,2,3-cd) pyrene	11A0220	0.0486	0.0764	mg/kg dry	N/A	0.344	0.139	0.168	118	159	35-130	19	40
2-Methylnaphthalene	11A0220	0.241	0.0764	mg/kg dry	N/A	0.344	0.284	0.308	57	89	25-120	8	40
Naphthalene	11A0220	0.196	0.0764	mg/kg dry	N/A	0.344	0.233	0.254	49	78	25-120	9	40
Phenanthrene	11A0220	0.191	0.0764	mg/kg dry	N/A	0.344	0.278	0.274	114	111	30-125	1	40
Pyrene	11A0220	0.0631	0.0764	mg/kg dry	N/A	0.344	0.144	0.157	106	125	30-125	9	40
Surrogate: 2-Fluorobiphenyl	11A0220			mg/kg dry					74	77	45-110		
Surrogate: Nitrobenzene-d5	11A0220			mg/kg dry					68	68	40-120		
Surrogate: Terphenyl-d14	11A0220			mg/kg dry					101	108	35-130		
UST ANALYSIS PARAMETERS													
QC Source Sample: CUA0195-06													
Motor Oil	11A0219	2.87	65.8	mg/kg	N/A	10.0	51.9	49.3	74	70	45-140	5	40
Surrogate: Octacosane	11A0219			mg/kg					176	168	55-150		ZX

HOWARD R. GREEN CO. - CEDAR RAPIDS <
8710 Earhart Lane SW
Cedar Rapids, IA 52404
Robin Husman

Work Order: CUA0222
Project: Clinton Brownfields - Clinton, IA
Project Number: 725560J09

Received: 01/06/11
Reported: 01/17/11 14:21

CERTIFICATION SUMMARY

TestAmerica Cedar Falls

Method	Matrix	Nelac	Iowa
OA-2 - 8015B	Solid/Soil	X	X
OA-2 - 8015B	Water - NonPotable	X	X
SM 2540 G	Solid/Soil		X
SW 6010B	Water - NonPotable	X	X
SW 7060A	Water - NonPotable	X	X
SW 7131A	Water - NonPotable	X	X
SW 7421	Water - NonPotable	X	X
SW 7470A	Water - NonPotable	X	X
SW 7740	Water - NonPotable	X	X
SW 8260B	Solid/Soil	X	X
SW 8260B	Water - NonPotable	X	X
SW 8270C	Solid/Soil	X	X
SW 8270C	Water - NonPotable	X	X
SW	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF-FSS-01.

DATA QUALIFIERS AND DEFINITIONS

- CIN** The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- M1** The MS and/or MSD were outside control limits.
- RL1** Reporting limit raised due to sample matrix effects.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the control limits.

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50633
Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?
Compliance Monitoring

Client Name: HR Green

Client #: _____

Address: 3710 Rockhardt Ln SW

Project #: _____

City/State/Zip Code: Cedar Rapids, IA 52404

Project #: _____

Project Manager: Robin Husman

Site/Location ID: _____

State: IAEmail Address: r.husman@hrgreen.com

Report To: _____

Quote #: _____

Telephone Number: 319-841-4000

Invoice To: _____

PO #: _____

Sampler Name: (Print Name) Bridget WulfDate Sampled: 1/19/11Sampler Signature: Bridget Wulf

SAMPLE ID	Time Sampled	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	SL - Sludge DW - Drinking Water	GW - Groundwater S - Soil/Solid	WW - Wastewater S - Soil/Solid	HNO ₃	HCl	NaOH	H ₂ SO ₄	Methanol	None	Other (Specify)	Analyze For:				QC Deliverables	Remarks	
																Client #: _____						
Depot-1	0-2.5'	1/14/11	1555	G -	S	-	-	-	-	-	X	X	X	X	X							
Depot-1	10-12.5'	1/14/11	1617	G -	S	-	-	-	-	-	13											
Depot-2	0-2.5'	1/14/11	1634	G -	S	-	-	-	-	-	1	X										
Depot-2	12.5-13.5'	1/14/11	1644	G -	S	-	-	-	-	-	1	3										
Depot-3	5-7.5'	1/15/11	854	G -	S	-	-	-	-	-	1	3										
DUP-1		1/15/11	-	G -	S	-	-	-	-	-	1	3										
Depot-2		1/14/11	1700	G -	GW	3	-	-	-	-	1	X	X									
Field Blank		1/15/11	810	G -	DW	13	-	-	-	-	2	X	X	X	X							

Special Instructions:

LABORATORY COMMENTS:

Relinquished By: <u>Bridge Wulf</u>	Date: <u>1/15/11</u>	Time: <u>1630</u>	Received By: <u>Melissa Jett</u>	Date: <u>1/15/11</u>	Time: <u>0555</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Sample Receipt and Temperature Log Form

Client: HRG

Project: _____

City: CRDate: 11/11/11 Receiver's Initials: JL Time (Delivered): 8:55**Temperature Record:****Cooler ID# (If Applicable)**

54 °C / On Ice Temp Blank Temperature out of compliance**Thermometer:**

- IR - 61997671 'B'
- IR - 90876942 'C'
- IR - 61854108
- 22126775

Courier:

- | | |
|--|--|
| <input type="checkbox"/> UPS | <input type="checkbox"/> TA Courier |
| <input type="checkbox"/> FedEx | <input type="checkbox"/> TA Field Services |
| <input type="checkbox"/> FedEx Ground | <input type="checkbox"/> Client |
| <input type="checkbox"/> US Postal Service | <input type="checkbox"/> Other |
| <input type="checkbox"/> Spee-Dee | _____ |

Custody seals present?

 Yes

Custody seals intact?

 Yes No Non-Conformance report started**Exceptions Noted**

- | | |
|--------------------------|---|
| <input type="checkbox"/> | Sample(s) not received in a cooler. |
| <input type="checkbox"/> | Samples(s) received same day of sampling. |
| <input type="checkbox"/> | Evidence of a chilling process |
| <input type="checkbox"/> | Temperature not taken:
<hr/> |

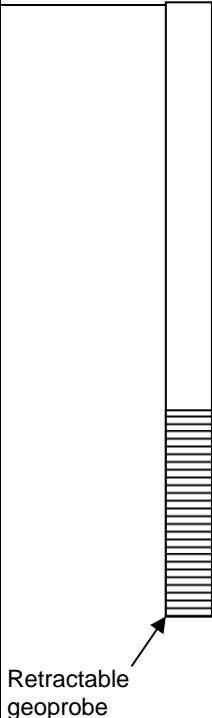
APPENDIX D
BORING LOGS

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM									
Boring / Well Number: Depot-1		Facility Name: Former Rail Depot			Facility Street Address: 325 11th Avenue South, Clinton, IA				
Boring Depth (ft) 12.5 X Diameter (in): 3					Drilling Method: Geoprobe				
Certified Well Contractor Name: BGS, Inc.					Logged by: Bridget Wolfe				
Registration Number: 6494									
Ground Surface			Top of Casing						
Elevation (ASL):			Elevation (ASL):						
Date: 1/4/2011	Date: 1/4/2011		UST		LUST				
Start Time: 1559	End Time: 1617		Number NA		Number NA				
Depth (feet)	Well Construction Details		Recovery	Sample No.	Type*	Field Screening Results (PID / FID)			
0			3/5		0.0*	0-1': Gravel/topsoil & sand			
1					0.4	1-1.5': Dk brown silty sand			
2						1.5-6': Brown med sand			
3									
4									
5			3 /5		0.4				
6						6-7.5': Brown sandy silt			
7					0.2	7.5-11.5': Sandy clay, brown, wet from 8-9':			
8									
9									
10			2.5/2.5		0.9*				
11						11.5-12': Sand, coarse			
12						12-12.5': Weathered bedrock			
13						EOB @ 12.5' - Refusal			
14									
15									
16									
17									
18									
19									
20									

* Interval collected for laboratory analysis.

Observations	Date:	1/4/11			
Water Levels (BGS)	Level:				
Static Water Level Symbol (v)	Time:				

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM						
Boring / Well Number: Depot-2		Facility Name: Former Rail Depot			Facility Street Address: 325 11th Avenue South, Clinton, IA	
Boring Depth (ft) 13.5 X Diameter (in): 3					Drilling Method: Geoprobe	
Certified Well Contractor Name: BGS, Inc. Registration Number: 6494					Logged by: Brigid Wolfe	
Ground Surface Elevation (ASL):			Top of Casing Elevation (ASL):			
Date: 1/4/2011	Date: 1/4/2011		UST Number NA		LUST Number NA	
Start Time: 1634	End Time: 1644					
Depth (feet)	Well Construction Details		Recovery	Sample No.	Type*	Field Screening Results (PID / FID)
0			2/5		0.0*	0-4': Brown med sand
1					--	
2						
3						
4						4-7': large void
5					0.0	
6						
7					0.0	7-12.5': Sandy silt to silty sand, wet @ 7.5-8, moist below; more sand w/depth; rock layer @ 8', wet from 11.5-12'
8						
9					0.0	
10						
11						
12					0.3*	12.5-13.5': Brown sand, weathered bedrock below
13						EOB @ 13.5' - Refusal
14						
15						
16						
17						
18						
19						
20						



* Interval collected for laboratory analysis.

Observations	Date:	1/4/11			
Water Levels (BGS)	Level:				
Static Water Level Symbol (v)	Time:				

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM						
Boring / Well Number: Depot-3		Facility Name: Former Rail Depot			Facility Street Address: 325 11th Avenue South, Clinton, IA	
Boring Depth (ft) 9 X Diameter (in): 3				Drilling Method: Geoprobe		
Certified Well Contractor Name: BGS, Inc.				Logged by: Bridget Wolfe		
Registration Number: 6494						
Ground Surface			Top of Casing			
Elevation (ASL):			Elevation (ASL):			
Date: 1/5/2011		Date: 1/5/2011		UST		LUST
Start Time: 852		End Time: 854		Number NA		Number NA
Depth (feet)	Well Construction Details		Recovery	Sample No.	Type*	Field Screening Results (PID / FID)
0			3/5			Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
1					0.8	0-0.5': Gravel
2					1.2	0.5-1': Dk Brown sand, rust spots
3						1-1.5': Hard clay layer, rusty & mottled
4						1.5-8.5': Dk brown/orange gravelly sandy clay, odor @ 7-8.5'
5			2 / 4		8.5*	
6					--	
7						
8						8.5-9': Weathered bedrock, small woodchips @ 8.5', odor
9						EOB @ 9' - Refusal
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						

* Interval collected for laboratory analysis.

Observations	Date:	1/5/11				
Water Levels (BGS)	Level:					
Static Water Level Symbol (v)	Time:					

APPENDIX E
WELL SEARCH

[Re-Start](#)[Well Search](#)[Print](#) | [Help](#) | [Log Off](#)

Well Search Report ?

Search Method: Address

For: Diane Pals
HR Green
8710 Earhart LN SW
Cedar Rapids, IA 52404

Subject: XY UTM Coordinates: 733114/4635184
Search Radius(ft.): 1000

Date: 2/10/2011

Prepared By: Pals, Diane

Included in search	No. of wells	Database
X	0	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	0	Public wells Municipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	0	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	6	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	0	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/-20m to 1150 m. Created from 7/2005 data.
X	0	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

Well Search Detail

Subject: XY UTM Coordinates: 733114/4635184
Search Radius (ft.): 1000

IGS Well Database

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source							

Public Wells

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source							

SDWIS public wells

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source							

Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
318962	2088062	T. 81 N., R. 7E., Sec. 7, SE, SE, NE, NW, NE	nom. +/- 25m.	294 (m)	19	01/01/2002		Status: Plugged; Well use: Monitoring
318965	2088063	T. 81 N., R. 7E., Sec. 7, SE, SE, NE, NW, NE	nom. +/- 25m.	266 (m)	16	01/01/2002		Status: Plugged; Well use: Monitoring
318966	2088057	T. 81 N., R. 7E., Sec. 7, SE, SE, NE, NW, SW	nom. +/- 25m.	277 (m)	16	01/01/2002		Status: Plugged; Well use: Monitoring
318967	2088064	T. 81 N., R. 7E., Sec. 7, SE, SE, NE, NW, SW	nom. +/- 25m.	286 (m)	16	01/01/2002		Status: Plugged; Well use: Monitoring
318969	2088059	T. 81 N., R. 7E., Sec. 7, SE, SE, NE, NW, SW	nom. +/- 25m.	270 (m)	16	01/01/2002		Status: Plugged; Well use: Monitoring
318972	2088060	T. 81 N., R. 7E., Sec. 7, SE, SE, NE,	nom. +/- 25m.	210 (m)	12	01/01/2002		Status: Plugged; Well use: Monitoring

NE, SW

Wells Registered For Testing

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

Permitted Private Wells

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

Abandoned Wells (plugged)

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

Water Use Facilities

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

Municipal Wells And Intakes

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

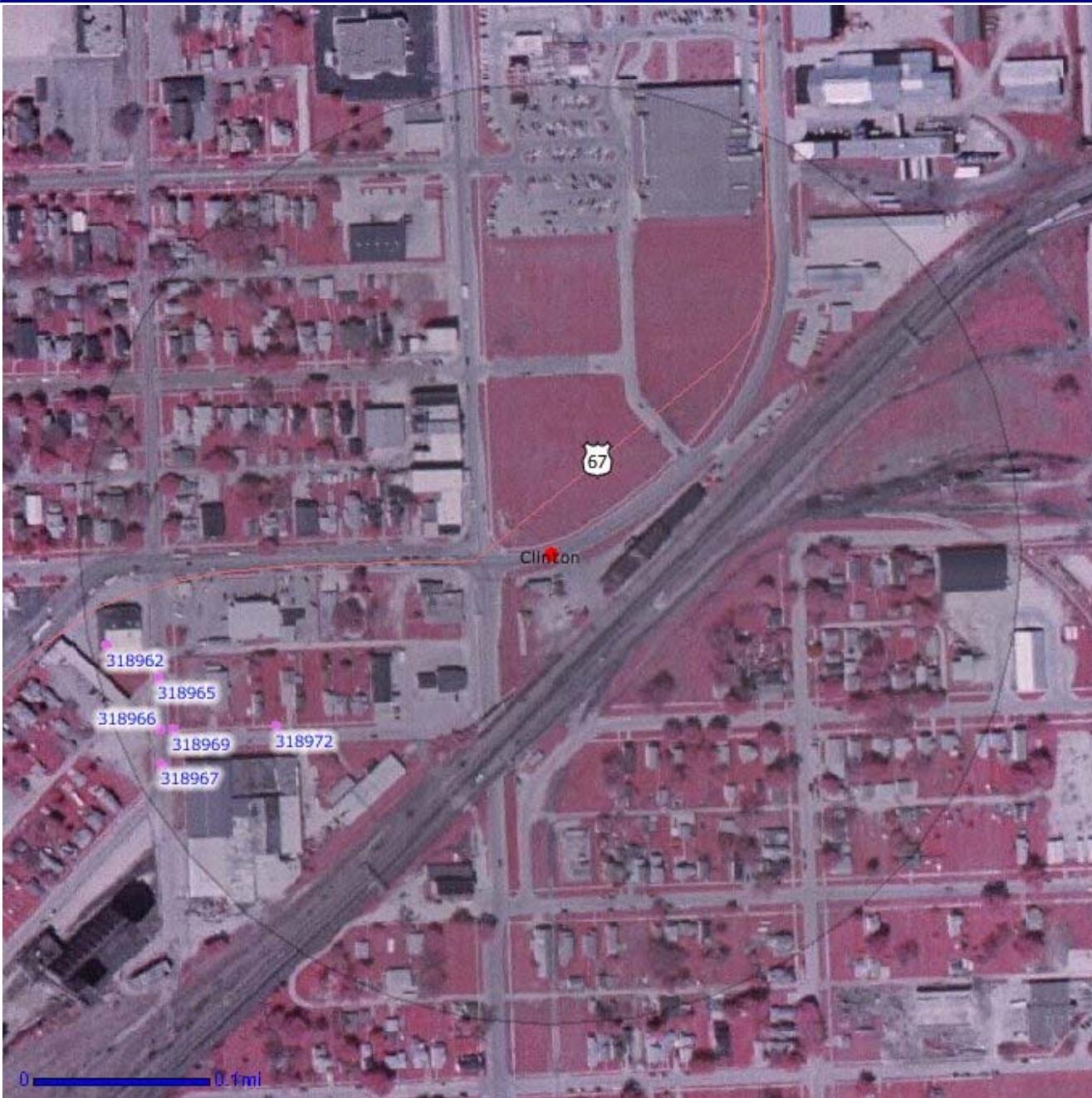
Ag Drainage Wells

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

Well Search Buffered Map

Subject: XY UTM Coordinates: 733114/4635184
Search Radius (ft.): 1000

**Map Notes:**

- UST
- LUST
- Please refer to the Accuracy column in Well Search Detail.
- Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.
- Aerial photos were flown in 2002.

[Search by Interactive Map](#)

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